

From ab4el.com Fri Jun 17 10:28:35 1994
From: "PMD G.SIFAKIS" <pmidsif@isoft.intranet.gr>
Subject: Re: [7m Heathkit Cantenna (?) Outpu[0m

>Does anyone know what the Heatkit dummy load phono output actually
>outputs? Is it an attenuated RF level or something else. I am
>looking for a way to use a transmitter as a signal generator
>to test out a receiver. I have misplaced my manual for the dummy
>load. Thanks. Bob AC4QO

The phono connector will give you a DC output relative to the RF power
fed to the dummy load.

George SV0KA

From ab4el.com Thu Jun 16 11:16:55 1994
From: alsun150!jvm@aluxs.att.com (Jim Morgan)
Subject: Re: /AA on CW ?

> From: Craig LaBarge <74740.3166@CompuServe.COM>
> Date: 15 Jun 94 17:58:24 EDT
> Subject: Re: CQ QRP
>
> Jerry:
>
>
> You don't need to sign /AA since your not using any Advanced privileges when
> you're operating CW.
>
> (other good advice deleted)
>
> Craig LaBarge
> WB3GCK
>

Whether or not you need to add /AA to your call depends on the license you
now hold. If you upgraded to Advanced from Technician, you *DO* need to add
/AA to your call, when on frequencies other than those authorized by the Tech
ticket. However, if you upgraded from General, Craig is correct: you don't
receive any additional CW frequencies, so you don't need the /AA on CW.

Good luck, and congratulations on the new license!

73,

Jim Morgan WX4D jvm@aluxpo.att.com

From ab4el.com Mon Jun 13 08:59:27 1994
From: teda@meaddata.com (Ted Albert)
Subject: 10/6 meter band opening Sunday

Did anyone else catch the great opening on 10 and 6 meters Sunday afternoon and evening. I used my Argonaut 535 at 2 watts into an end fed random wire, about 110' long, on cw most of the time. Picked up one new state and worked a number of stations to the northeast.

I listened on six meters using the old reliable station receiver and the new 6 meter converter from Ten-Tec. Heard stations from Mexico to Canada on SSB, even heard stations on AM. Haven't heard that mode used there in some time. Copied one beacon on CW from Maine. Guess I need to dig out the Ameco TX62, drop the drive to 5 watts and give this band a try again.

73 de Ted, KF8EE

From ab4el.com Mon Jun 13 10:19:12 1994
From: Duane P Mantick <wb9omc@ecn.purdue.edu>
Subject: Re: 10/6 meter band opening Sunday

>
> Did anyone else catch the great opening on 10 and 6 meters Sunday afternoon
> and evening. I used my Argonaut 535 at 2 watts into an end fed random wire,
> about 110' long, on cw most of the time. Picked up one new state and worked
> a number of stations to the northeast.

Hey, I was impressed with 10 meters for a fairly down spot in the sunspot cycle. I worked a bunch of folks, picked up about 20 new 10-10 numbers and got a new Canadian Province, Manitoba. Previously I had been able to work the 5,6 and 7 provinces and the eastern maritimes but never any of the stuff straight north (Ontario and Manitoba). <lemmesee, 3 and 4, respectively, right?>
Still need to get Ontario, though. Also worked Quebec, which I don't get too often. These guys were using an XL prefix which is evidently a special prefix celebrating the 50th anniversary of D-day.

I got to work a bunch of east coast guys well into the afternoon, which is rare from my QTH, and as the day went on I also picked up South Dakota and Texas. Heard a station in Kansas, but couldn't work him, and *did* nail down Missouri, which is another one I don't hear or work very often.

I heard a number of stations from Vermont, which always seems to be a tough nut to crack as well as Rhode Island.

10 faded out about midafternoon, around 3:30ish local time. or at least it did from my QTH. Your Mileage May Vary.... :-)

Later in the afternoon there was some lightning very close to my QTH so having things disconnected was OK anyhow. :-)

I wouldn't call it really short skip, but more "medium skip" that from my QTH was typically over 400 miles but less than 1200. Still left me needing Illinois and Michigan with a 10-10 number.....but, overall a satisfying band opening. Been a while since I worked a whole log page plus some in one session.....

I sure hope we get some more of this kind of conditions throughout the summer.....

The constant slow fading in and out was somewhat annoying, but with patience on both ends of the QSO it wasn't that hard to work through. Most of the fading I was hearing wasn't real "deep" until about the time that the band seemed to drop out.

>
> I listened on six meters using the old reliable station receiver and the
> new 6 meter converter from Ten-Tec. Heard stations from Mexico to Canada
> on SSB, even heard stations on AM. Haven't heard that mode used there in
> some time. Copied one beacon on CW from Maine. Guess I need to dig out
> the Ameco TX62, drop the drive to 5 watts and give this band a try again.
>

I don't personally own any 6 meter gear, but I heard quite a few folks on 10 talking about 6 being open - makes me think about acquiring some stuff.....

Duane
wb9omc

From ab4el.com Mon Jun 13 11:44:47 1994
From: Randall Rhea <randall@informix.com>
Subject: Re: 10/6 meter band opening Sunday

=>
=>Did anyone else catch the great opening on 10 and 6 meters Sunday afternoon
=>and evening. I used my Argonaut 535 at 2 watts into an end fed random wire,
=>about 110' long, on cw most of the time. Picked up one new state and worked
=>a number of stations to the northeast.

This is the best time of year for Sporadic E. (Es) The peak is around the summer solstice, June 21. June is a great month, and May and July are usually good too. There is a minor peak around Christmas also.

6m openings are very common this time of year, especially in the early evening. Contacts usually range from 400 to 1500 miles, although some double-hop contacts of 3000 miles or more are possible. You don't need much power to work Es, so this is a great propagation mode for QRP. Short contacts (e.g. less than 500 miles) on 10m sometimes indicate openings on 6m. Short contacts on 6m occasionally point to openings on 2m.

Randall Rhea
Client Services Engineer
Informix Software, Inc.
randall@informix.com

From ab4el.com Fri Jun 17 21:44:08 1994
From: Bensondj@aol.com
Subject: 30-40 troubleshoot

>The manual says secondary is to be "closly wound" . Does this >mean
>to spread out the primary windings over the whole coil , but >group
>the secondary tightly together ?
>Also the kit came with a piece of (single)ribbon cable but I >dont
>see where it is supposed to be used.

Yes- wind the primary around the entire winding. The secondary is close-wound over the primary at one end of the winding., i.e., tightly grouped together. No need to be obsessive about "close", though.

Last paragraph on manual p. 10: the secondary of T1 is wound using the length of single ribbon cable. Hope this helps- 72/73

Dave- NN1G

From ab4el.com Sat Jun 11 19:49:52 1994
From: rohrwerk@holonet.net
Subject: Re: 40/15m rigs?

On 06-08-94 sct@po.cwru.edu wrote to xenolith@halcyon.com:

> One way to build a 15m/40m dual-band rig is to take advantage of the
> harmonic relationship between the bands. You could do it with a
> direct conversion receiver, a 40m VFO, and a switchable frequency
> tripler. It might make a nice package for an R1 reciever.
>
> Stephen

I myself have built a 40/20 meter VFO/transmitter for portable use with my R2 using this very principle. Using the doubler from QRP Classics, De Maw's articles "Transmitter Design -- Emphasis on Anatomy."

I'm going for compactness -- it's being built dead-bug style in two 1-3/4 x 1-3/4 by 2-7/8 surplus steel boxes bolted back to back. The VFO/buffer/doubler is in the back box, and the Jackson Brothers ball drive takes a bit less than the left quarter of the front box, leaving all that room (!) for the TX which I am now debugging.

RX works fine. Trouble is, on TX it looks like the 7 MHz feedthrough might be a problem. The output looks more like 7 Mhz on the scope as you approach full power! I probably need more than one tuned circuit on the doubler output.

I'm playing with various stages detailed in W1FB Design Note Book, W1FB QRP Notebook, and QRP Classics. So far, I found that using *all* Class C stages turns out LESS efficient than 2 Class A or AB drivers and a Class C final. Probably because of harmonics in the untuned stages? Ended up using a FET after the doubler, and worked much better, then a 2n2222A linear stage, a 2N3866 linear stage, and a MRF475 Class C stage.

Worked fine on the breadboard. Now, when it's all crammed together...

```
* John Seboldt...Mpls, MN...As a ham, K0JD...as a human...well,... *
|                               rohrwerk@holonet.net                       |
*      J.S. Bach of Borg: "Your style will be assimilated."              *
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-> Alice4Mac 2.3 E QWK Eval:05Mar94

From ab4el.com Tue Jun 14 14:01:56 1994
From: bal@ccd.harris.com (Bruce Lifter)
Subject: A Good Day at the Mail Box!

Yesterday was one of those rare, once in a life time, days at the mail box!

I found:

- The June edition of QRPp
- A local club newsletter
- A 30-40 NE Qrp kit
- A flyer from Dan's Small Parts and Kits
- and NO BILLS! :-)

Once again, QRPp looks great...

The local club newsletter was just in time for that night's meeting...

I can't wait to get started on the 30-40 kit!...

Dan's new catalog had lots of new kits. He now has kits from Oak Hills, MXM Industries, along a few new misc. kits! The Oak Hills kits and the NN1G Mark II are currently on sale! Can I swing a CL20/40 in addition to the 30-40 and the Sierra I have ordered? Hmmm :-)

73, Bruce, KR4AQ

--

Bruce Lifter
Harris Corporation
Controls Division

MS: R5-202
email: blifter@ccd.harris.com

From ab4el.com Fri Jun 17 14:00:10 1994
From: adams@chuck.dallas.sgi.com (Chuck Adams)
Subject: Antennas for FD

In order of my preference for antennas for QRP FD.

1. Rhombic with 600 ft per leg up 100 ft
2. V-beam with 600 ft per leg
3. Long wire up 10M and of length 80M
4. Wire Beam on 40M
5. Anything that'll radiate after that
 preferrably Butternut HF-6V vertical

Beams and associated towers are just too much of a hassle for FD (at least all that I've seen at temporary sites). Too many guy wires and too many people required to put it up.

dit dit
Chuck Adams K5FO CP-60
adams@sgi.com

From ab4el.com Fri Jun 17 15:12:48 1994
From: "H. Ward Silver" <hwardsil@seattleu.edu>
Subject: Re: Antennas for FD

The best antenna site I've ever seen is the Maui RC's Field Day Site at Ho'okipa State Park, just east of Paia. They have a field at the north edge of the island, 100' feet above salt water with a little cinder block hut and a telephone pole right in the middle. A big rhombic, fixed on the States, go up every year. Sounds good? It is good!

73, Ward N0AX

From ab4el.com Mon Jun 13 12:38:44 1994
From: wyn@stc06.ctd.ornl.gov (WYNN C C)
Subject: ARK 4 Sidetone switching

I just finished assembly of the "basic" ARK 4 transceiver. Everything is OK except the sidetone switching. Key down, everything seems OK. Key up, the sidetone slowly stops long after (~200ms) the relay snaps. It's as if I have a fast attack, slow decay sidetone switch. The 7 MHz CW seems to switch OK when listened to on a separate receiver. I don't have a scope to look at the sidetone switching signal. Has anyone had a similar experience with the ARK 4? Tonight I will touch up all of the solder joints and double check the R C values in the associated circuitry. I want to get this cleared up before I proceeding with construction.

Also, has anyone come up with a fix for the LOUD relay?

73,
C. C. (Clay) Wynn, N4A0X
wyn@ornl.gov

From ab4el.com Mon Jun 13 23:50:39 1994
From: Bob Smith <0005512847@mcimail.com>
Subject: ARK 4 Thoughts

Just finished building the S and S Engineering Ark 4. Really cool rig. Real small about 1 x 4 x 5. Pretty light too. All parts were well segmented and the whole thing went together in about 15 hours.

It would have gone much faster but I was really anal about double checking each componant - I even checked each resistor with a VOM, made sure they were all oriented the same way, triple checked each value, etc.

I really enjoy kit building so this wasn't as much of a chore as I make it out to be. It also worked the first time! I really liked the kit layout - the board is silkscreened, plated through, and pre

tinned. The instructions were good but you had to jump from place to place. There were general instructions that referred to a parts list in the back of the manual that was mainly used for parts placement.

THERE IS NO WIRING - all parts are placed on the board. This really helps speed the process.

My SECOND contact was with a VE3 in Ontario off of my CQ. WOW. My first contact was with Toledo OH, but that was off of the station power supply into my station G5RV. That doesn't count. The VE contact was into a temp 40M dipole fed with 32' of RG174 up about 20' using a 2AH gell cell off of my back porch - what a thrill this was. It was like my first contact again. I now know the fun of QRP!

I should also mention that as a Tech+ these contacts were made at night in the novice section! The rig displays fine filtering.

Question: I really should tune this rig completely - I listened for the signal on my ICOM 725 rig and the note sounded good and on frequency, but I think the receiver needs to be peaked and the RIT etc set right. Anyone with any tips on how to tune a rig with just a VOM and HF rig? I can send it back and for less than \$25 they will get it working but I would rather do it myself.

Thanks a lot for all of the help I have received here. I look forward to building more kits and hanging out here. BTW I am on the lookout for a 15M project.

Thanks again group.
72 de Bob, N3FTU

From ab4el.com Thu Jun 16 12:24:43 1994
From: "JEFF M. GOLD" <JMG@tntech.edu>
Subject: ARK4

Hi,

been reading the reviews of the ARK4.. especially by Mike Czuhajewski. I was a little concerned that I had missed the audio whine problem. I went back and tried the rig out again.. didn't notice the whine.. backed off the audio to a non-usable level and sure enough the whine was there. Personally, this doesn't bother me at all. If you turn the audio up to a level that is enough to hear even the weakest incoming signal, you can't hear the whine.

I didn't find ANY distorted audio.. if I turn the volume up to a little less than 1/4, which is my usable level, there is no problem at all with audio. I find the receiver works very well and

so does the transmitter.

I love the small size of the rig. My only dislikes are the thumbwheel switches and the mechanical TX/Rec switching.

73,72

Jeff, AC4HF

From ab4el.com Thu Jun 16 20:19:09 1994
Subject: ARK40 vs. ARK4 Receiver sections?
From: rehm@zso.dec.com

Jeff,

While there have been some good ARK40 / ARK4 info lately, could you (or anyone else) compare the receiver sections of the ARK40 vs. ARK4?

I'm in analysis/paralysis mode over a purchase decision between the two. The ARK40 receiver, according to the ARRL testing in your QST ARK40 review, looks pretty hot. How does the ARK4 stack up? (If it's pretty close, I'll be going for the ARK4 for backpacking mode.)

FYI - I've been out of amateur radio for 10 years. Seeing all of this great QRP activity (and a chance to spread the QRP fever to students at my daughter's middle school) has really energized me. So, I've embarked on a self-styled "Three Step" ham recovery program:

(0) Upgrade to Advanced Class - done!

(1) Build a commercial kit (e.g., ARK40 or ARK4) while collecting / building some test equipment - hence this question about receiver performance;

(2) Build a club kit that will encourage me to modify/enhance and collect lots of groovy parts - I joined NW QRP Club and NorCal, and Imailed my NorCal Sierra order sheet earlier this week;

(3) Design / build myself. Seems like more fool proof PLL, DDS, SCAF and DSP filter designs as well as embedded controllers designs would be a boon to the QRP builder.

/eric rehm
N7FJK

From ab4el.com Sun Jun 12 18:54:41 1994

From: Mike.Czuhajewski%hambbs@wb3ffv.ampr.org (Mike Czuhajewski)
Subject: Attenuator for sale

Out of loyalty to the QRP community I'll post this here instead of rec.radio.swap--I'm sure someone will be interested.

Lots of QRPers are homebrewers and experimenters, and step attenuators are very useful for that. They are also very useful for milliwattting as well, if you're out on the lunatic fringe of QRP like I am, although you have to be careful when putting any attenuator on the output of your rig and be certain you don't exceed the power rating (and it's always wise to limit it to one half of the limit).

FOR SALE--One rotary step attenuator, \$25 including shipping. This is a Texscan model RA-54, 0-50 dB in 1 dB steps (two concentric dials, 1 and 10 dB steps), BNC connectors, 50 ohms, rated to 1.5 GHz in the current Trilithic catalog (which acquired part of Texscan in 1989), rated at 1/2 watt average power. Size: cylindrical, just under 2" diameter (but the BNCs stick out beyond that) and under 6" long (including knobs). Weighs about a pound. Material is aluminum, and can be shined up easily.

This was checked out by me at DC* and full test details will be provided. I guarantee that there are no burned out sections, and all sections are well within the published tolerances in the catalog for currently-made units, at least at DC--I didn't check it at RF yet.

(Tests on one I already sold showed that it pretty well met the specs across the spectrum to 1.5 GHz, although it was on or slightly over the edge in some cases at upper freqs...but I'll perform and provide results of the RF sweep on this one IF REQUESTED, and knowing the exact attenuation at a given frequency is more important, and better, than simply knowing that it is somewhere within a published spec range.)

It does have a cosmetic defect of sorts--the 1 dB knob looks like it had some sort of chromed metal insert in the front, but all that's left is a bit of glue residue.

If interested, reply by e-mail or call (work 410-290-1919 or home 410-551-1633).

WA8MCQ%hambbs@wb3ffv.ampr.org
WA8MCQ@WB3V.MD (packet)

* (in accordance with the article I wrote but haven't yet submitted to the QRP Quarterly--which I rewrote heavily after QST/QEX rejected it, taking out all the stuffiness and making it more down to earth

and fleshed out; hey, it wasn't a badly written article, but how much demand is there for articles about calibrating attenuators in this increasingly non-technical hobby of ours???)

--

Mike Czuhajewski, user of the UniBoard System @ wb3ffv.ampr.org
E-Mail: Mike.Czuhajewski%hambbs@wb3ffv.ampr.org
The WB3FFV Amateur Radio BBS - Located in Baltimore, Maryland USA
Supporting the Amateur Radio Hobby, and TCP/IP InterNetworking

From ab4el.com Fri Jun 17 17:15:32 1994
From: B61395@awtims.fe.anlw.anl.gov
Subject: Attenuators

I think you will find design info for resistive attenuators in the ARRL Electronics Data Book.

diddleydahdidah (c) 1977 WB8RXN, Reproduced with permission.

73 de KR8L (wparmley@anl.gov)

From ab4el.com Tue Jun 14 15:02:00 1994
From: meh@cbmsm1.cb.att.com (m.e.hartwell)
Subject: Battery for sale

Before sending an ad to rec.radio.swap for these I thought I would offer them here first.

For Sale

200 AH Sealed Lead Acid Battery
Removed from DEC 11/70 Computer
I have kept these charged and use them every once in a while. Lots of good power for QRP use.

\$10.00 each I have two I will sell
they are heavy you ship or pick up here in or around Columbus OH.

Marty Hartwell KD8BJ
Home 614-855-2470 after 5:00 PM
Work 614-860-2470 daily or meh@cbmsm1.cb.att.com

From ab4el.com Sun Jun 12 14:41:52 1994
From: Alan Kaul <kaul@netcom.com>
Subject: bibi for a while

Hiya .. hv enjoyed reading the list daily (it's like subscribing to another magazine!!) but gotta QRT for a while (my companmy is sending me to Haiti to cover the unpleasantness for TV Network news. Probably won't take a rig but will take a shortwave rcvr -- be listening for you all on the usual frequecies! As Arnold once said '' I'LL BE BACK'' and I'll resubscribe then. 72 de alan

[<Alan Kaul, W6RCL>] kaul@netcom.com

From ab4el.com Thu Jun 16 12:40:42 1994
From: "JEFF M. GOLD" <JMG@tntech.edu>
Subject: Calling CQ

Having read the mail on calling CQ with implications about QRP operation in general, I did a bunch of thinking about QRP operation. I still find that I can operate in the same manner as I would with QRO ALMOST all of the time. I believe strongly that the QRP myth is perpetuated by a couple of secret organization.

The first secret organization is the amplifier addicts. These people need to feel the flow of thousands of watts of power flowing through the air waves to add meaning and spiritual fullfillment to their lives. In order to justify using high power they need to have the proper view of ham radio. This view is that it is obvious to even the most feeble minded hams that low power can't possibly get a signal further than across the room. I remember have a car full of hams (including 3 newbies) in my car on the way back from a ham fest. My car was equiped with a Ten Tec Argonaut 509, running about 3 watts out on SSB, and a Hustler antenna. I was operating SSB, so that the newbies who were no-code techs, could participate. I heard a loud distorted signal calling CQ. I answered his call and he came back to me immediately. He reported I was a 57 with excellent audio. He was a 59 with distorted audio. After a bit we got into the equipment part of the discussion. He told me he was running XXXX rig with a 3 element Yagi about 100 feet in the air and a XXXX brand amplifier running a Gillion watts. I told him what I was running.

The second secret organization is the QRP fanatics that don't want anyone to really know that QRP is no different than "real" ham radio. They perpetuate the myth that you need super antennas and DXepedition skills to make QRP contacts. You better not call CQ..

because with such low power, it won't work. (***** note this is humour.. not intended to offend *****) This group almost had me convinced. I have been running QRP on both SSB and CW since about 6 months after I got my license. Not being very intelligent or aware of the obvious facts I would just turn on my QRP gear and go about my businness. I would use battery power, homemade wires, even lossy verticals made out of PVC, operate mobile with verticals and all types of sacriligious activities. I would scan the bands and answer CQs.. if I didn't hear anyone, I would call CQ. I would operate contests and even work DX and filled 3 log books and numerous contest logs this way. If I knew anybetter I probably would never have attempted these ridiculous tasks. Not sure I hadn't lost my marbles, I got on the air last night. There were electrical storms and the 40 meter band was in poor shape. Not many stations on, and couldn't find anyone calling CQ. Went to 7.047 or so and called CQ. No one answered. Called again. No one answered. Called again, no one answered. Well I guess those guys were right all along. NOT. gave it another try and 2 stations came back to me. I was cranked all the way up to 4 watts and using a vertical antenna.

Have a good one.

73,72,71,70 and counting

Jeff, AC4HF

From ab4el.com Thu Jun 16 14:51:06 1994
From: prvalko <prvalko@vela.acs.oakland.edu>
Subject: Re: Calling CQ

On Thu, 16 Jun 1994, JEFF M. GOLD wrote:

> Having read the mail on calling CQ with implications about QRP
....hugemongous text regarding QRP operation techniques deleted...

.... multi-kilobyte text regarding calling CQ with QRP deleted...

> gave it another try and 2 stations came back to me. I was cranked
> all the way up to 4 watts and using a vertical antenna.

HOLY COW Jeff, You WERE cranked! You need a Prozac the size of a MFJ-9040!
BTW... 4 watts!!! You fergot to mention the REAL MEN (no sexism implied)
OF QRP... the milliwatters! Who SCOFF at your Hi-power operation.

Why... once I worked JY1 just by staring at a copy of an oscillator in
the 1979 ARRL Handbook. Impossible? And yet it happened...

7/3 =paul= wb8zjl

From ab4el.com Thu Jun 16 15:22:40 1994
Subject: Re: Calling CQ
From: "John F. Woods" <jfw@ksr.com>

> HOLY COW Jeff, You WERE cranked! You need a Prozac the size of a MFJ-9040!
> BTW... 4 watts!!! You fergot to mention the REAL MEN (no sexism implied)
> OF QRP... the milliwatters! Who SCOFF at your Hi-power operation.
>
> Why... once I worked JY1 just by staring at a copy of an oscillator in
> the 1979 ARRL Handbook. Imposible? And yet it happened...

Yes, but did you take into account the 60W used by the lightbulb that lit
your copy of the Handbook? Hah! Wastrel!

;-)

73, John, WB7EEL/1

From ab4el.com Thu Jun 16 16:40:57 1994
From: Duane P Mantick <wb9omc@ecn.purdue.edu>
Subject: Canadians?

In light of recently FINALLY working Quebec, Ontario and Manitoba, I'm
looking at how many Canadian provinces I have left to nail down.

I need a VE8 and a VY1 for certain. I'm trying to recall what that
funny prefix over in the maritimes is, something like FP8 or
something like that.....which suggests a French posession.

Canadians, what about that? D'ya know, eh?

Now, we got any VE8's or VY1's on this mailing group? I seem to recall
somebody in British Columbia but no others....

Duane
wb9omc

From ab4el.com Mon Jun 13 11:39:01 1994
From: msdooley@rockdal.aud.alcatel.com (Michael S. Dooley)
Subject: Coming to San Jose

ALL!

I'll be coming to San Jose Tuesday evening till Friday (maybe Saturday!) on business. I'd like to meet some fellow QRPers. Also, I'm looking for a rig. An NN1G or MFJ or HW8 preferably on 40meters to buy. I looked at HamCom here this past weekend and found one HW9 (sold \$150) one HW8 (sold \$65) and two HW7s (sold \$65 and \$40). The HW9 and HW8 were sold while I watched (sigh). The HW7s I decided I didn't want to buy. I did see an Index Labs radio (very impressive)! Other than that, it was kinda slow.

Mike Dooley KE4PC

msdooley@rockdal.aud.alcatel.com

From ab4el.com Fri Jun 17 15:37:00 1994

From: adams@chuck.dallas.sgi.com (Chuck Adams)

Subject: Congratulations NorCal

Gang,

Congratulations are in order for the rapidly growing club, Northern California QRP Club, founded June 1993. In just one short year they have grown to the third largest club in the world, behind QRP-ARCI in second place, and G-QRP which is in number 1 place. This based on active membership.

Again, this is a remarkable achievement.

If I had to guess at why it's working, and I knew you were gonna ask, I'd put down in writing from the top of my pointed head the following:

1. The leadership of the club makes it fun.
2. They are out doing things.
3. Club projects like the NorCal 40 and the Sierra help a great deal to raise the interest level.
4. A dynamic newsletter and editor thereof.
5. Regular meetings, although informal, keep people in touch with one another. You don't feel left out of fun.
6. They have avoided petty politics and don't

seem to have any single member with an unmanagable ego.

7. They've got something for all ages.
No Old Foggie syndrome as I call it.
8. Informal contests. Lots of work on
mods for the club projects.

I think we all can learn from this. Take notes and JUST DO IT. If your section of the country within a 150 mile radius doesn't have a local QRP, then you get off your butt and get one started. If you need help, just ask Doug Hendricks or any of the others on this mailing group. Both Doug and I (I'm volunteering Doug here without prior notice :-)) will give you free publicity in the QRPp and K5FO newsletters. Also, announce it on the QRP think.com mailer. Inquiring minds just gotta know.

NorTex just hit 250 members in 30 days!!! Announce it, they will come.

dit dit
Chuck Adams K5FO CP-60
adams@sgi.com

From ab4el.com Thu Jun 16 16:41:30 1994
From: teda@meaddata.com (Ted Albert)
Subject: construction methods

Just curious as to what method the folks using "ugly construction" are employing with their projects; (i.e. point-to-point using component leads, push-in pins with bus wire, wire-wrap)?

I spent several hours last night using wire-wrap for a 160 transmitter I am working on. Although it looks nice, I am seriously wondering if the time was well spent. Now I have to mount the components on those tiny pins. I used the tool/wire from Radio Shack. A friend of mine in the maritime radio repair business says there is a lot of wire wrap used in that type of equipment. If that is the case, then I can see why it might be more expensive to produce that kind of equipment and service it.

I think I may switch to point-to-point for the mixer stage this weekend.

73 de Ted, KF8EE

From ab4el.com Thu Jun 16 17:25:41 1994
Subject: Re: construction methods
From: "John F. Woods" <jfw@ksr.com>

> Just curious as to what method the folks using "ugly construction" are employing
> with their projects; (i.e. point-to-point using component leads, push-in pins
> with bus wire, wire-wrap)?

I usually use "ground-plane" or "dead bug" construction; grounded component leads soldered directly to the ground plane, other connections floating in midair (possibly suspended from standoffs made from 1M resistors if necessary). It's quick and easy. VFOs get etched PC boards, however.

> I spent several hours last night using wire-wrap for a 160 transmitter I am
> working on. Although it looks nice, I am seriously wondering if the time was
> well spent. Now I have to mount the components on those tiny pins. I used the
> tool/wire from Radio Shack. A friend of mine in the maritime radio repair
> business says there is a lot of wire wrap used in that type of equipment. If
> that is the case, then I can see why it might be more expensive to produce
> that kind of equipment and service it.
> I think I may switch to point-to-point for the mixer stage this weekend.

At least in the digital world, wire-wrap is useless for clock speeds over a couple of MHz; digital signals usually have much higher frequency spreads than the clock speed might indicate (sharp edges and all that), but wire wrap probably isn't the way to go for most RF projects. However, since 160-meters is essentially DC, it should be OK :-). If the mixer is a balanced mixer, use point-to-point and try to make the layout as physically symmetrical as possible. (Of course, the components won't be identical in values, but you don't want to make things any worse with seriously asymmetrical spurious capacitances and such.)

From ab4el.com Thu Jun 16 18:38:07 1994
From: btoback@netcom.com (Bruce Toback)
Subject: Re: construction methods

>> I think I may switch to point-to-point for the mixer stage this weekend.

>At least in the digital world, wire-wrap is useless for clock speeds over a
>couple of MHz; digital signals usually have much higher frequency spreads
>than the clock speed might indicate (sharp edges and all that), but wire wrap
>probably isn't the way to go for most RF projects. However, since 160-meters
>is essentially DC, it should be OK :-). If the mixer is a balanced mixer,
>use point-to-point and try to make the layout as physically symmetrical as

>possible.

Another alternative that I've used for a few projects is a tool made by OK Industries that dispenses very thin insulated wire from a spool. This can be wrapped around component leads; the wire is then soldered. The insulation vaporizes during the soldering process. The advantage to this over wire wrap is that the wires are all exactly the right length, so there's no more stray capacitance than there would be for point-to-point. It's also easier than cutting wires to length for point-to-point (at least where you can't use component leads to get where you want to go, as with IC pins). The downside is that it is kind of hard to solder, and some of the joints _look_ cold even though they're perfectly good.

-- Bruce
KN6MN

From ab4el.com Thu Jun 16 18:46:46 1994
From: Jeffrey Herman <jherman@uhunix.uhcc.hawaii.edu>
Subject: Re: construction methods

Ted and the Gang:

I would question very much the use of wire wrap in marine gear. The marine environment is not very friendly to electronics and a mechanical rather than a soldered connection might be prone to salt and moisture finding their way between the terminal and the wire. At least that's my opinion. Hmmm, maybe the manufacturers do this on purpose in order to do periodic 'costly' repairs...

I use point-to-point on wooden blocks for my xmtrs; screws driven into the wood act as terminal points. Talk about ugly construction....
I'm always amazed that these things actually transmit.

Does anyone know if copper tacks take solder well? I would think they would, and if so I will use them as my terminal points. Off to the hardware store - anyone need anything while I'm there?

Oh, sorry Chuck, but you can't trademark a notion that's in common use! The boys on the maritime freqs were dit-ditting each other long before most of us were born.

Geez, I love this hobby!

.

Jeff NH6IL

From ab4el.com Thu Jun 16 18:59:24 1994
From: raymonda@EBay.Sun.COM (Ray Anderson)
Subject: Re: construction methods

... stuff deleted

>At least in the digital world, wire-wrap is useless for clock speeds over a
^^
>couple of MHz; digital signals usually have much higher frequency spreads
^^
>than the clock speed might indicate (sharp edges and all that), but wire wrap
>probably isn't the way to go for most RF projects. However, since 160-meters
>is essentially DC, it should be OK :-). If the mixer is a balanced mixer,
>use point-to-point and try to make the layout as physically symmetrical as
>possible. (Of course, the components won't be identical in values, but you
>don't want to make things any worse with seriously asymmetrical spurious
>capacitances and such.)

... stuff deleted ...

Regarding the above, here's my 2 cents worth of comments:

People have been using wire wrap techniques successfully for years on ECL circuitry up through 100 MHz for prototyping fast digital equipment. Granted, it isn't the best way to go, but it DOES work and for frequencies MUCH higher than a couple of MHz. One of the tricks that are used is to make sure your wires are NOT nice and neat and parallel (especially in data buss runs). Random ratnest-like lead dress reduces crosstalk. Also, it pays to keep the wires as close as possible to the groundplane (increases the mutual inductance to ground and thereby reduces the lead inductance).

Also, when talking about digital signals, the clock rate is pretty irrelevant when you have fast rise-time signals. A 40 MHz clock might have a 200pS rise time. This means that you need to be concerned about harmonics out to at least 1.75 GHz ($.35/\text{rise time}$)

The above doesn't pertain a whole lot to analog RF construction. I always go for the dead-bug approach in prototype radios. It ain't pretty, but it usually works.

73's,

Ray Anderson WB6TPU
raymonda@uranium.ebay.sun.com

From ab4el.com Fri Jun 17 12:20:37 1994
From: lemoine@sicom.com (Dana Lemoine)

Subject: Re: construction methods

>
>
> ... stuff deleted
>
> >At least in the digital world, wire-wrap is useless for clock speeds over a
> ^^^
> >couple of MHz; digital signals usually have much higher frequency spreads
> ^^^^^^^^^^^^^^^^^
>
> ... stuff deleted ...
>
> Regarding the above, here's my 2 cents worth of comments:
>
> People have been using wire wrap techniques successfully for years
> on ECL circuitry up through 100 MHz for prototyping fast digital equipment.

I have built more than one digital system running at clock speeds in excess of 50 Mhz using nothing but wirewrap. Each had 6-10 large VME boards in a case that was housed in a 19" rack.

In my experience, the keys are:

Large, solid power and gnd planes. Power and gnd for each IC must be soldered to the appropriate plane. Wirewrap is left for signals.

Rats nest construction. No X-Y routing. Avoid parallel lines.

Even distribution of clocks. Make every clock net terminate in a few loads very close together. If you get reflections, you only want one.

Be willing to twist crucial nets with gnd wires.

Now.... if only RF circuits were so simple... :->

Dana LeMoine
lemoine@sicom.com
KB7WSW/AE

From ab4el.com Fri Jun 17 16:38:52 1994
From: teda@meaddata.com (Ted Albert)
Subject: Re: construction methods

> I would question very much the use of wire wrap in marine gear. The marine
> environment is not very friendly to electronics and a mechanical rather

> than a soldered connection might be prone to salt and moisture finding
> their way between the terminal and the wire. At least that's my opinion.
> Hmmm, maybe the manufacturers do this on purpose in order to do periodic
> 'costly' repairs...

I questioned it as well, but his response was that done properly, wire-wrap was superior to soldered connections and withstood the corrosive effects of being out on the high-seas. We were talking about commercial maritime HF gear, not the stuff you get for pleasure boating.

>
> I use point-to-point on wooden blocks for my xmtrs; screws driven into
> the wood act as terminal points. Talk about ugly construction....
> I'm always amazed that these things actually transmit.
>

Well I managed to get the components mounted on the pins last night, fired it up and smiled when it did work. I had so much fun tinkering with it that I lost track of time last night. Now I am paying the price at the office this afternoon.

I followed the rules about not getting obsessed with exact part values, so I used what I had on hand in the circuit, a speech amp, sounded great on the test bench. Tonight the balanced modulator goes on the card with point-to-point wiring. If I am lucky, I will be able to inject some drive from my old WRL 755 VFO this evening to test the balanced modulator.

73 de Ted, KF8EE

From ab4el.com Fri Jun 17 17:57:32 1994
From: raymonda@EBay.Sun.COM (Ray Anderson)
Subject: Re: construction methods

>> I would question very much the use of wire wrap in marine gear. The marine
>> environment is not very friendly to electronics and a mechanical rather
>> than a soldered connection might be prone to salt and moisture finding
>> their way between the terminal and the wire. At least that's my opinion.
>> Hmmm, maybe the manufacturers do this on purpose in order to do periodic
>> 'costly' repairs...

>I questioned it as well, but his response was that done properly, wire-wrap
>was superior to soldered connections and withstood the corrosive effects of
>being out on the high-seas. We were talking about commercial maritime
>HF gear, not the stuff you get for pleasure boating.

Supposedly, when wire-wrap is done properly, the sharp corners of the wire-wrap post bite into the wire creating a gas tight metal to metal contact. Since there is no air or moisture between the wire and the post it can't corrode. Industry experience over time with millions of wire-wrap connections seems to bear this out. (I've never seen a wire wrapped commercial radio though.)

73's de WB6TPU
Ray (raymonda@uranium.ebay.sun.com)

From ab4el.com Tue Jun 14 20:32:57 1994
From: ah301@yfn.ysu.edu (Jerry Sy)
Subject: CQ QRP

QRPer's

I finally got my rig setup (I think), but have not had any replies to my CQ calls for 3 days now. I called a friend living about 1/2 mile away to see if he can hear my signal and he says he hears it loud and clear, I can also hear his signal loud and clear.

how should I call CQ ?
CQ CQ CQ de N3RKD N3RKD N3RKD/QRP K
I just passed my advanced but no ticket yet, where do I insert the /AA ?

BTW, I am just using a random wire (about 30 ft) on 40m, about 15 ft above ground, and my apartment is at a relatively higher than average elevation.

any help is appreciated.

thanks

73s de jerry N3RKD

--

From ab4el.com Wed Jun 15 08:22:11 1994
From: mvjif@mvubr.att.com (James M Fitton +1 508 960 2577)
Subject: CQ QRP

Many newcomers have problems calling "CQ" and making a contact using QRP power rigs.

Experienced operators (QRP & QRO) do much more listening than calling. They also have many more QSOs, even when using milliwatts of power.

There are often many operators on the air calling CQ. Try calling them. Also listen to QSOs in progress and call one of the people when it ends (called tail-ending). Join in the QRP nets mentioned in QRP-ARCI newsletters. Those folks love weak signals. Use a keyboard or keyer for crisp, legible sending.

Listen to QSOs and experienced operators to hear how it is done. It is a gratifying artform and skill that can be mastered with a little persistence, patience, and perception.

And you thought it was going to be easy once you got your ticket ?
It may be easier with a with a kilowatt but

POWER IS NO SUBSTITUTE FOR SKILL.....

72 W1FMR

From ab4el.com Wed Jun 15 09:28:09 1994
From: hideg@qmserv.erim.org (Steve Hideg)
Subject: Re: CQ QRP

Reply to: RE>CQ QRP
W1FMR spake:

>POWER IS NO SUBSTITUTE FOR SKILL.....

Jim, I think you just hit upon the counter statement to "Life is too short for QRP"!!!!

72

--Steve, N8HSC

dit dit <- Copyright 1993, 1994, Chuck Adams, K5F0.
Used without permission ;-)

From ab4el.com Wed Jun 15 09:49:04 1994
Subject: Re: CQ QRP
From: "John F. Woods" <jfw@ksr.com>

> how should I call CQ ?
> CQ CQ CQ de N3RKD N3RKD N3RKD/QRP K

That looks fine to me.

> I just passed my advanced but no ticket yet, where do I insert the /AA ?

Between 7.15Mc and 7.225Mc. :-) (You only need it when you're using the upgraded privileges.) (Unless you upgraded from Novice or Technician.) When you use it, it goes after the call (N3RKD/AA); I don't know if you need to use it each time (N3RKD/AA N3RKD/AA N3RKD/AA) or just once to get the point across.

From ab4el.com Wed Jun 15 09:55:13 1994
From: Duane P Mantick <wb9omc@ecn.purdue.edu>
Subject: Re: CQ QRP

>
>
>
> There are often many operators on the air calling CQ.
> Try calling them. Also listen to QSOs in progress and call
> one of the people when it ends (called tail-ending). Join
> in the QRP nets mentioned in QRP-ARCI newsletters.
> Those folks love weak signals. Use a keyboard or keyer for
> crisp, legible sending.

Of course, it should be said that using a keyboard or keyer won't help you a bit if your intended mode happens to be SSB. :-)

But a great deal of what W1FMR says also applies to running low-powered SSB.

I have had very poor luck making my throat sore with CQ's - doesn't seem to get a lot of response. I get more QSO's from "tail-ending", as FMR calls it.

Yes, you CAN work DX with only a few watts SSB, but ya gotta have a hell of a lot of patience, especially if you're trying to

bust a pileup. You CAN do it, but you're going to run across some of the true lids of ham radio in the process, the kind who don't give a damn if they squash you into the crud repeatedly to get their QSO.

You will also be occasionally befriended by someone who will hear your call (if I'm trying to bust a pileup, I usually throw out the last two letters of my call *phonetically* and tack QRP on the end of it) and when *he* works the DX station will tell him that "there is a QRP station trying to work you". A great many ops will then call for "QRP stations only, please" and that is your best shot at it. You may be surprised when he works 5 or 6 or more QRPs right in a row.

>
> Listen to QSOs and experienced operators to hear how it is
> done. It is a gratifying artform and skill that can be
> mastered with a little persistence, patience, and perception.

Absolutely. And also take the time to listen to those ops who *don't* use the "3 p's" and see what happens to them.....

>
> And you thought it was going to be easy once you got your ticket ?
> It may be easier with a with a killowatt but
>

I run in the 10-10 phone contests with my measely 10 watts and am sometimes heard using the phonetics "One Masochistic Communicator" or something thereabouts ("one" as a phonetic is confusing right after WB9). I've never *won* or even come close, but unless conditions are really AWFUL from my QTH, I've finished respectably. More importantly for me, I pick up a bunch of new 10-10 numbers and of more interest possibly for the readers of this mailing list, you'd be surprised how many DX stations have 10-10 numbers and run in these contests.

Anyway, trying to run low power in a contest is a real challenge. If you think you've GOT patience, try this and see how well your patience fares. :-)

For the CW QRP ops, 10-10 also has two CW contests, too.....

> POWER IS NO SUBSTITUTE FOR SKILL.....
>

Amen. Keep the faith. Semper Fi. May the Force be with you.
etc etc etc. :-)

(or as that neat t-shirt I saw at Dayton said, "QRO is for Sissies!")

Duane
WB9OMC

From ab4el.com Wed Jun 15 10:32:21 1994

Subject: Re: CQ QRP

From: "John F. Woods" <jfw@ksr.com>

> I run in the 10-10 phone contests with my measely 10 watts and
> am sometimes heard using the phonetics "One Masochistic Communicator"
> or something thereabouts ("one" as a phonetic is confusing right after WB9).

"Obviously" would be less confusing (amusingly enough :-).

73, John, WB7EEL/1 (Still searching for The Right Phonetic...)

From ab4el.com Wed Jun 15 14:27:58 1994

From: peterj@netcom.com (Peter Jennings)

Subject: Re: CQ QRP

>
> > I run in the 10-10 phone contests with my measely 10 watts and
> > am sometimes heard using the phonetics "One Masochistic Communicator"
> > or something thereabouts ("one" as a phonetic is confusing right after WB9)
>
> "Obviously" would be less confusing (amusingly enough :-).
>

Onanistic? That might suggest another word for the M, though.

Peter

-- AB6WM

peterj@netcom.com

From ab4el.com Wed Jun 15 16:44:08 1994

From: Duane P Mantick <wb9omc@ecn.purdue.edu>

Subject: Re: CQ QRP

>
> >
> > > I run in the 10-10 phone contests with my measely 10 watts and
> > > am sometimes heard using the phonetics "One Masochistic Communicator"
> > > or something thereabouts ("one" as a phonetic is confusing right after WB9)
> >
> > "Obviously" would be less confusing (amusingly enough :-).
> >
>
> Onanistic? That might suggest another word for the M, though.
>
> Peter
>

> -- AB6WM peterj@netcom.com
>

Peter Jennings, eh? Ever read the news on 10 meters? :-)

Hmmmmmm.....Websters 7th online doesn't tell me what Onanistic is.
Anything like Conanistic for all us barbarians? :-)

I have frequently heard people use "Outboard MArine Corporation".
Back when I still had my '81 Dodge Omni, when mobile I'd use
"Omni Motor Car".

The real OF's said "Old Man Charlie", which I thought was really
dry, and innacurate, too, as there isn't a Charlie anywhere in my name.

I have used "Oscar Mike Charlie" in my CQ's, ans sometimes
"Ocean Mexico Canada".....can't recall what else.

73's OM

Duane
WB9OMC on the air
wb9omc online

p.s. Hmmmm.... Online Magic Computers ????? :-)

From ab4el.com Wed Jun 15 18:00:50 1994
From: Craig LaBarge <74740.3166@CompuServe.COM>
Subject: Re: CQ QRP

Jerry:

>how should I call CQ ?
>CQ CQ CQ de N3RKD N3RKD N3RKD/QRP K
>I just passed my advanced but no ticket yet, where do I insert the /AA ?

My experience has been that responding to someone else's CQ is far more
effective than calling CQ yourself. You have a captive listener! Also, try
tail-ending on the end of a QSO that just finished (i.e., calling one of the
stations).

You don't need to sign /AA since your not using any Advanced privileges when
you're operating CW.

QRP also takes a fair amount of patience. When band conditions aren't very
good, QRP can be tough.

Your antenna setup sounds similar to what I use for portable operation with a fair amount of success. (I usually drop a quarter-wave wire out of a second story window.) Although it's by no means optimal, you should be able to manage some contacts. You might try attaching a quarter-wave counterpoise wire to the tuner's ground stud and running the wire around the floor of the shack. By the way, my main antenna here at home is my rainspout (operated like a random wire) and it's been working great for QRP!

Good luck & keep plugging away!

Craig LaBarge
WB3GCK

74740.3166@CompuServe.com

From ab4el.com Wed Jun 15 23:40:27 1994
From: Mike.Czuhajewski%hambbs@wb3ffv.ampr.org (Mike Czuhajewski)
Subject: Re: CQ QRP

I second the motion about checking into the QRP nets, where folks EXPECT weak signals and are willing to dig for them. For about 5 years now I've been checking into the Saturday morning QRP net on 7040 KHz on the east coast with WA1JXR running it, while running under 10 milliwatts, and many times under 5 milliwatts. I haven't been doing it lately since my antenna is mostly on the ground (just enough of the loop is in the air to hear some signals), but will start up again soon.

If you want to try some REAL QRP after the 5-watt scene gets boring, try milliwatting! (Watts are for wimps! --copyright 1990, WA8MCQ.) And if you get really hooked, you'll find times when doing it with 100 mW gets to be a drag. (And back at the peak of the sunspots when ten meters was really hot, working into Europe at the 30 milliwatt level got to be boring, believe it or not.) By the way, the punchline on those 10 milliwatt and under check-ins to the QRP net: WA1JXR is 350 miles away. If you hear me check into the net and you have no problem copying me, I'm probably pouring on the coals at 4 watts or so, but on occasions I'll be waaaaay down in the mud, with a handful of milliwatts. Don't forget, the 1000 Miles Per Watt award is also given for receiving as well as transmitting. (And W1FMR has heard me quite a few times at those levels, and he's not much closer than 'JXR.) 73 de WA8MCQ

--

Mike Czuhajewski, user of the UniBoard System @ wb3ffv.ampr.org
E-Mail: Mike.Czuhajewski%hambbs@wb3ffv.ampr.org
The WB3FFV Amateur Radio BBS - Located in Baltimore, Maryland USA
Supporting the Amateur Radio Hobby, and TCP/IP InterNetworking

From ab4el.com Wed Jun 15 23:40:31 1994

From: Mike.Czuhajewski%hambbs@wb3ffv.ampr.org (Mike Czuhajewski)
Subject: Re: CQ QRP

So someone used the famous Chuck Adams "dit dit" without permission...I'd better make my own copyright claim while I can--in case you see anyone use the term "Queue Our Pea" please remind them they owe me a royalty for each use. I've been using that on the ham packet network for several years as the subject line when sending messages to people on QRP topics. (And K3TKS claims copyright on the term QRPDXTU.) Any other QRP copyrights out there? 73 de WA8MCQ

--

Mike Czuhajewski, user of the UniBoard System @ wb3ffv.ampr.org
E-Mail: Mike.Czuhajewski%hambbs@wb3ffv.ampr.org
The WB3FFV Amateur Radio BBS - Located in Baltimore, Maryland USA
Supporting the Amateur Radio Hobby, and TCP/IP InterNetworking

From ab4el.com Wed Jun 15 12:29:40 1994
From: burdick@interval.com (Wayne Burdick)
Subject: Crystal matching

John,

As you pointed out, using an NE602 oscillator does measures the parallel resonant frequency. But this is an excellent predictor of series-resonant frequency for low-frequency crystals.

The NorCal 40 uses an I.F. of 4.915MHz, and at this frequency, crystals matched within 20Hz for parallel-resonant frequency are almost as closely matched for series-resonant frequency, and certainly within 50Hz. This is fine for a filter with a 400-Hz -6dB passband.

I hope that builders will use *both* methods and discover the correlation for themselves. It would be interesting to plot the results for several different batches of crystals from 1 to 10 MHz. (If anyone has time to try this, please post the results.) I've had to use series-matching techniques with 8 and 9 MHz crystals.

73,
Wayne, N6KR

From ab4el.com Wed Jun 15 16:00:59 1994
From: adams@chuck.dallas.sgi.com (Chuck Adams)
Subject: Crystals

Gang,

The question came up on crystals and difference in measuring them in parallel vs. series resonant modes. There is a difference. In fact, I've got 100 crystals, 50 from one Korean manufacturer and another 50 from another Korean house, all at 4.00000MHz. I was measuring their series resonant frequencies and plotting distribution of f.

If I were to take the same crystals, which I just may do, put them in a parallel resonant mode, I would get a completely different set of parameters for each crystal. It's just the physics of crystal geometry and their electrical and mechanical properties. If I took one crystal and it measured frequency $f(0)$ in series mode and $f(1)$ in parallel, $f(0) \neq f(1)$, then took another crystal and it resonated at $f(2)$ in series, its parallel resonant frequency would not be $f(2) + (f(1) - f(0))$!!! It is crystal dependent. The only way this would work is if the manufacturer took extra care and used the highest quality quartz they could find. I assure you that they are not going to do this for a \$1 crystal for a computer.

I spent time as an undergraduate physics major at a Christian Institution of Academic Excellence working for HP, Collins Radio, and James Knight doing frequency studies as a function of surface curvature. I It was fun work, paid \$1.50 an hour, and I never thought that it would serve me so well in later years.

dit dit
Chuck Adams K5FO CP-60
adams@sgi.com

From ab4el.com Wed Jun 15 18:54:49 1994
From: adams@chuck.dallas.sgi.com (Chuck Adams)
Subject: Crystals

Gang,

I went and derived the series and parallel frequencies for a Quartz crystal. It's too complicated to do here,

but let's say that the series resonant frequency for a crystal is $f(0)$ - f -sub-zero and is written as

$$f(0) = 1/(2\pi) * \sqrt{1/(LC)}$$

the parallel resonant frequency for the crystal will be something like

$$f(1) = 1/(2\pi) * \sqrt{1/(LC) + 1/(LC(t))}$$

where $C(t)$ is the total capacitance across the crystal including its equivalent parallel capacitance internally.

The point here is that the parallel resonant frequency is HIGHER than the series resonant frequency and it's also dependent upon the capacitance from the circuit. The series resonant frequency is not determined by external capacitance of the circuit!! This is a little known fact to most amateurs, but let this group be the first group in total to learn of this at one time.

For series resonance, the impedance of the crystal is a pure resistance having a relative low value. For AT units from 5 to 10MHz this value may be between 10 to 100 ohms. For parallel resonant circuits the impedance is much higher and may be from 10,000 to 100,000 ohms.

Hope this helps.

dit dit

Chuck Adams K5FO CP-60

adams@sgi.com

From ab4el.com Thu Jun 16 00:48:48 1994

From: adams@chuck.dallas.sgi.com (Chuck Adams)

Subject: dit dit

Hey, I do not have a copyright on 'dit dit'. I have released to the general public at no charge whatsoever. :-) all rights to same. (Excuse the period on the previous line, just too fast on the keyboard).

Now the Trademark (tm) may be a different issue. :-)

dit dit (tm)

Chuck Adams K5FO CP-60
adams@sgi.com

From ab4el.com Thu Jun 16 07:10:36 1994
From: Mike.Czuhajewski%hambbs@wb3ffv.ampr.org (Mike Czuhajewski)
Subject: Re: dit dit

Argh....you're right--it's a trademark, not necessarily "copyright".
Just don't forget to ask for a royalty every time you see someone use
it! 73 and QRPDXTU de WA8MCQ....dit dit..... (My nickels are in the
mail to you and K3TKS)

--

Mike Czuhajewski, user of the UniBoard System @ wb3ffv.ampr.org
E-Mail: Mike.Czuhajewski%hambbs@wb3ffv.ampr.org
The WB3FFV Amateur Radio BBS - Located in Baltimore, Maryland USA
Supporting the Amateur Radio Hobby, and TCP/IP InterNetworking

From ab4el.com Fri Jun 17 11:38:43 1994
From: LVE@mica.inel.gov
Subject: RE: DX on 30M

I say "keep 'em off"! Although I enjoy chasing DX (I'm over the 200 mark
total with about 120 countries on QRP), its sure nice to have one band that is
not cluttered up (usually...) with pile-ups and DX fanatics on a feeding
frenzy! So I say let the testers and DXers have the other bands and leave
30M alone!

73E-2, Larry W1HUE/7 (Idaho)

"Real QRPers don't use beam antennas..."

From ab4el.com Fri Jun 17 14:49:07 1994
From: "H. Ward Silver" <hwardsil@seattleu.edu>
Subject: RE: DX on 30M

Although it's pretty easy to keep contests off 30m, and most testers
actually prefer it to remain that way, it will be pretty hard to keep
DXers off of 30m when it becomes a prime band due to conditions. There's
been some pretty good stuff on 30m lately, too. Actually, why not on 30?
Since there's no kW allowed there, QRPers have a 1 to 2 S-units better chance.

73, Ward N0AX

P.S. "Real QRPers don't use beam antennas"? Tell it to AA2U!

From ab4el.com Thu Jun 16 16:24:42 1994
From: adams@chuck.dallas.sgi.com (Chuck Adams)
Subject: DXCC 30M ARRL

Gang,

Just got email from John Bittner, WR3C.

I did not know, 'cuz I am not country chasing too seriously at this time, but the DXAC (DX Advisory Committee) of the ARRL has suggested that 30M be added to the single-band DXCC list.

Now here we go gang. This could be good news and this could be bad news. The 30M band has been pretty quiet due to the fact that DXCC wasn't a big deal on this band. So, there hasn't been a whole lot of activity that I can tell on the band. It's relatively quiet and uncrowded. That's nice most of the time and at other times it's difficult to find someone to talk to.

If the above proposal is accepted or whatever, will we be swamped with the 200W (sure I'm only going to use 200W QRO boys with their Alpha77+'s) limit rigs and big gun antenna systems? Anytime a new country appears, WHAMMMMM, pileups and the resulting crud that goes with it may appear.

Do you think that we'll work more stations or will we be squashed? That is the question..... Inquiring minds wanna know.

dit dit

Chuck Adams K5FO CP-60
adams@sgi.com

From ab4el.com Thu Jun 16 18:34:25 1994
From: stark <msswmod@sage.unr.edu>
Subject: Re: DXCC 30M ARRL

Well Gang,

I would vote to keep 30M off the DXCC list. I have a few
contries and like contesting. But it sure is nice to have
a place where life is slower and a fellow can take the time
to smell the roses.

But then you have to remember that I think they ruined 40M
when they let phone on the band.....

73's, Ron

.....KU7Y.....
.....Monte "Ron" Stark.....
.....Sun Valley, Nevada.....

From ab4el.com Thu Jun 16 18:49:43 1994
From: adams@chuck.dallas.sgi.com (Chuck Adams)
Subject: Re: DXCC 30M ARRL

Ron, KU7Y, said that they allow phone on 40M!!!
Is this true. I've been on the band since 1957
and I didn't know that!!! :-) You're right
Ron, the band ain't what it used to be. :-) ;-)

dit dit
Chuck Adams K5FO CP-60
adams@sgi.com

From ab4el.com Thu Jun 16 19:42:32 1994
From: Mike.Czuhajewski%hambbs@wb3ffv.ampr.org (Mike Czuhajewski)
Subject: Re: DXCC 30M ARRL

Squashed.

--

Mike Czuhajewski, user of the UniBoard System @ wb3ffv.ampr.org
E-Mail: Mike.Czuhajewski%hambbs@wb3ffv.ampr.org
The WB3FFV Amateur Radio BBS - Located in Baltimore, Maryland USA
Supporting the Amateur Radio Hobby, and TCP/IP InterNetworking

From ab4el.com Thu Jun 16 20:56:07 1994

From: James Speer <F_SPEERJR@ccsvax.sfasu.edu>
Subject: Re: DXCC 30M ARRL

KU7Y wrote:

>Well Gang,
>
>I would vote to keep 30M off the DXCC list. I have a few
>contries and like contesting. But it sure is nice to have
>a place where life is slower and a fellow can take the time
>to smell the roses.

I agree, and have spent most of my recent QRP time on 30. But how about another proposal: open 30 to DXCC and contests, but LIMIT POWER TO 5 WATTS. Wouldn't have to do it by law, as long as ARRL and the contest organizers agreed. How about that...a qrp band all our own!

>But then you have to remember that I think they ruined 40M
>when they let phone on the band.....

Gee, I haven't heard any phone on 40...oh...you mean that area above 7080 is part of a ham band?

72!
Jim
K5YUT

From ab4el.com Tue Jun 14 00:08:53 1994
From: Rick Zabrodski <zabrodsk@med.ucalgary.ca>
Subject: EMF and Ham Radio Operators

The following text is a proposed technical paper for the upcoming Canadian Amateur Radio Convention. The talk will be given to individuals with extremely varied technical background and minimal medical or scientific background. Comments appreciated!

HAM RADIO: HAZARDOUS TO YOUR HEALTH? RAC CONVENTION 1994

Dr Rick Zabrodski M.D.

Over the past 10 years the general public has become increasingly concerned about electromagnetic fields (EMF) and their possible effects on the human body. There have been numerous articles in the press linking electric power lines and other electrical equipment such as cellular phones to cancer in particular.

After reviewing the currently available data my conclusion is that if there is a serious health hazard for the ham radio hobbyist, it is a relatively small one. At present it appears that EMF and its effect on the typical ham radio operator is not likely to be a major problem. This is apparent when comparing EMF to the many well known, documented hazards that we subject ourselves to on a daily basis. This does not mean however, that there are no concerns with EMF exposure and further study together with "prudent avoidance" is advised. I will present a brief summary of what is currently known on this incredibly complex and rapidly expanding area of research. A rationale for appropriate, prudent behavior based on this knowledge will then be presented. To better understand the issues involved in EMF, we must first define what particular areas are relevant to the hobby of Ham Radio. EMF is usually divided broadly into two categories, Ionizing and Non Ionizing. Ionizing radiation includes frequencies from the ultraviolet spectrum and up. Examples include solar radiation, x-rays and nuclear explosions. The serious side effects of ionizing radiation are well known and depend on frequency, intensity and duration of exposure. Based on this knowledge, there are currently specific public and occupational exposure standards (e.g. x-ray technicians, nuclear plant employees). Fortunately, your transmitter does not emit any ionizing radiation!

The second area of EMF more relevant to amateur radio are those frequencies in the "non-ionizing" spectrum. This spectrum stretches from very low frequencies to the infra-red region. Examples include power lines, transformers, electric motors and radio frequencies stretching from VLF through microwaves. Non-ionizing EMF is further subdivided as thermal or athermal. This refers to the measurement of actual tissue heating. The issue here is that of wave length and intensity. For example, we know that we can use relatively low power microwaves to cook food and low power infrared lasers to burn tissue. However if an individual was situated near a high power (megawatt) mf/hf/vhf antenna biological heating (thermal effects) would also be evident. The ANSI guidelines have suggested limits for public and occupational exposure in this area. It should be noted that

these limits have been repeatedly lowered over the years. They remain a source for continued debate.

For our purposes, the main consideration in amateur radio is usually that of lower level

radio frequencies that do not cause measurable heating to the body and are therefore

classified as athermal. It should be pointed out that currently there are no published

scientific safety standards for power levels and frequencies that do not cause thermal

effects. This is where most of the controversy begins! There is still not enough scientific

evidence to define clearly what is going on here. Despite this we hear emotional statements from concerned citizens' groups and the equally polarized public relations

statements of profit oriented multinational corporations. The implication for various self

interest groups including amateur radio is tremendous. If a case for a cause and effect

health hazard can be made, the cost implications will be enormous. If you think antenna

restrictions are a problem, consider the implications of having to prove that you have a

EMF compliant radio station!

A wide variety of scientific investigations from numerous sources now show that there

clearly are measurable biological effects secondary to athermal EMF. In examining these

effects, the following hierarchy of biological functioning has been examined:

- Free radicals

- Cellular

- Tissue

- Organ system

- Whole organism

- Populations

To complicate things even more, research done at the cellular and tissue level suggests

that other factors besides frequency and intensity are important. The EMF modulation,

bandwidth and pulsatile vrs steady state characteristics have all been shown to have

different effects. It is apparent that certain EMF "windows" may be more important than others.

What are some of these effects? At the cellular level we know that EMF causes measurable changes with calcium and hydrogen ions. There appears to be changes in

cellular communications by way of electrochemical and enzyme pathways. These effects have been studied particularly in immune cell function (T-cells) as well as cell growth and other types of cell recognition systems. At a tissue and organ level, we now have evidence that the brain hormone melatonin, is also effected. All the above are certainly interesting to the Ph.D. biologist, but how do they affect you and me? The current literature suggests that EMF likely does not cause cancer. However, it may have a role as a promoter (enhancer) of cancer by modifying the cells in the immune system that normally act to prevent or correct cancer in its early stages. In other words, cancer cells may be created by a chemical agent or ionizing radiation. Subsequently the EMF handicapped immune system may not be as effective in identifying and destroying these cells in time to prevent further cancer cell growth. At the other end of the cellular spectrum are the "groups of organisms" that we call a population. The study of populations and relationships with disease is called Epidemiology. The often quoted study of 67,829 male, mainly Californian Hams in the 1980's suggested a small increase in several types of cancers. Several points should be noted about this study. First, there was a reported decreased incidence in certain other cancers. Furthermore, these Hams did not die any sooner than would be anticipated for anyone else. It was also pointed out that one third of these amateur radio operators had occupational electromagnetic exposure together with possible exposure to other potential hazards including solder fumes and toxic chemicals. This study and many others like it did not involve any actual measurement of cumulative EMF exposure, only that such exposures were likely to occur. What about the effects of EMF on female hams who live in Iowa? Often epidemiological studies give rise to more questions rather than answers! Some subsequent epiemilological studies involving occupational exposures (generally much higher than hobby exposures) to EMF tend to support the atypical cancer findings initially described. These individuals were usually exposed to numerous other agents and it appears that chemical exposure was particularly important. What we can say about the "silent key" study is that

there is an apparent relationship of still uncertain significance but certainly there is no proof of a cause and effect relationship with cancer. Therefore, we now know that non ionizing, athermal, low level radiowaves used in amateur radio do cause biological changes in the human body that are measurable at the cellular, tissue, and organ system level. The significance, if any, of these changes remains uncertain. It currently appears unlikely that these changes can be directly linked to causing cancer. Unfortunately there does remain the possibility that they have a small but not yet clearly defined role in allowing other more toxic agents to cause cancer by promoting or enhancing their effects. Other effects may exist, both good and bad, that are yet to be described. I believe that it will ultimately be in this area of biological rather than epidemiological research where we find the definitive answer to our questions. At the same time we may also develop a better understanding of cancer and immunological diseases such as arthritis and AIDS. When we look at the scientific evidence at the organism and population level, the possible link between cause and effect concerning EMF and disease continues to be poorly understood. Nonetheless, there remains evidence for concern, particularly in those individuals with significant exposure to EMF and other potential cancer causing agents in their occupations. More study in this area is also indicated! Considering the above information, it may be considered wise to practice what has been called "prudent avoidance." As a ham radio-physician, here is my advice:

- Don't smoke
- Don't get fat
- Eat sensibly
- Exercise regularly
- Wear a seatbelt
- Wear a bicycle helmet
- Climb your tower on sunny, windless days and use a proper belt

Paying attention to the above issues will provide a clear, measurable and significant benefit to your long term health. With the above duly noted, what about ham radio and EMF?

First, we must recognize that the ANSI guidelines are based on THERMAL guidelines. Furthermore, they do not take into account the modulation dependent interactions

that
seem to be important in athermal EMF research. In fact, there are no guidelines
for ham
radio type exposure to EMF at the present time. However, I certainly would agree
with
the following:

QRP : Use the lowest possible power as conditions permit.

This is particularly important with the higher frequencies and in situations where
the
antenna is close to the operator. The use of UHF/VHF handhelds would ideally
involve a
separate microphone with the radio and antenna held above your head. If this is
not
possible, the handheld should be kept as vertical as possible using low power and
brief
transmissions. (Leave the long winded lectures to 75 metre AM.)
When operating HF at levels of 100 watts or less, beams should be kept at least 35
feet
above the ground and higher when using more power. On a typical suburban lot a
vertical
should be roof mounted. (They usually work better up there in the clear anyway).
Any
indoor antennas should be restricted for QRP use only.
Finally, your linear should be reserved for "true emergencies" such as working
3Y0PI on
the last day of the Dxpedition as a "new one" for the DX honor role. I would
emphasize
that special care is required when operating at microwave levels as the chance of
significant athermal and thermal exposure is much higher. Further, more detailed
suggestions can be found in various sources including the ARRL Handbook and the
ARRL Antenna Book.
In summary, we now know that non-ionizing, low level, athermal EMF does cause
measurable biological effects. The consequences of these findings are yet to be
accurately
assessed but further information will be forthcoming. Those at highest potential
risk are
individuals with prolonged occupational exposure to EMF and have additional
exposure to
other potentially toxic agents. Although further study is needed, it appears that
the risk
involved with ham radio EMF exposure remains low when compared to other
established
health risks. "Prudent avoidance" is recommended.
I hope this encourages all of you to quit smoking, eat smart and exercise safely.
These
measures together with prudent QRP operation and high antennas will hopefully

allow us
all to discuss this topic again for many years to come!

*****-----

Dr. Rick Zabrodski BSc, MD, CCFP(E) * VE6GK "glider king"
EMAIL: zabrodsk@med.ucalgary.ca * "M.D. on weekdays"
Packet: VE6GK@VE6YYC.#cgy.ab.can.na * "Solar powered aviator
Phone: (403) 271-5123 Fax: 225-1276 * on weekends!"

From ab4el.com Tue Jun 14 09:57:05 1994
From: "Muenzler, Kevin" <MUENZLERK@uthscsa.edu>
Subject: RE: EMF and Ham Radio Operators

Dr Rick Zabrodski, MD wrote:

lots of stuff....
....
....

It is quite true that at the power levels and frequencies that
amateur radio operators use pose little threat from EMF radiation
one must still be very careful when operating at the higher
powers and frequencies.

There are several rules that you should (MUST) follow:

** NEVER operate your amp with the cover removed!

This is specially true when operating 2 meters
and above. I have a friend who was almost totally
blinded after making "adjustments" to his 1KW
440 amp with the cover removed for several hours
of "testing." He also had to have one of his
testicles removed due to the "cooking" effect of
the radiation from his open amp. He stated that
there was no pain in his eyes. He simply woke up
the next day in a dark haze. He did however have
have significant pain a couple of days later in
the other area.

** As Dr Zabrodski stated, use the lowest possible power when operating UHF handhelds (its the law also).

There can be significant heating of the retina by UHF radiation, especially in the 900+MHz bands. This usually causes no pain and by the time the effects are noticed the damage is done and is irreversible.

** NEVER look into the horn of a microwave transmitter (gunplexer)

If you can see the opening, you are being exposed. It only requires a few milliwatts per square centimeter to cause significant heating of the retina by a microwave transmitter. As stated above, the damage is almost never noticed immediately and is almost always irreversible.

I learned these, among other safety tips by working part-time at KTSA/KTFM Radio while attending the University of Texas here in San Antonio. When working around amplifiers that produce upwards of 25KW and antennas with 100KW ERP ones learns about EMF safety or goes blind and sterile.

Amateur radio is perfectly safe if practiced with a little common sense. Follow the rules, use the lowest power to maintain communications.

Kevin,

Legal stuff:

The above opinions are my own and not necessarily those of the staff, faculty, administration, or lab animals (woof!) of The University of Texas Health Science Center at San Antonio or anyone else who is not me.

Kevin R. Muenzler, WB5RUE
muenzlerk@uthscsa.edu

The University of Texas Health
Science Center at San Antonio

** There is no such thing as a Monkey-Proof Program! **
** I can prove it! **

From ab4el.com Thu Jun 16 20:32:47 1994
From: william r finch <wrfin@firefly.prairienet.org>
Subject: FD

Champaign-Urbana Illinois will be running under K9CW (a very cool call!).
If you here us, give us a point. 73s

Bill Finch	~ ~
KF9KI	~~ ~~
Champaign, Il	~ ~
wrfin@prairienet.org	/ \

From ab4el.com Mon Jun 13 16:30:53 1994
From: Andrew Comas <comas@dwcu03.enet.dec.com>
Subject: FD software?

Last year for QRP Field Day we used a public domain MS-DOS software package which I thought was called W8???.exe. It was specific for FD. Does anyone what the name might be and where I might get it? (The laptop with it on it was stolen).

Does CT ver6.26 support Field Day? I didn't see Field Day support on it. (Actually this would be best since we'll be 2B2 with 2 laptops)

I would appreciate direct e-mail, since everything on this mailing list comes to me 2x.

Andrew KF2JH
comas@nyo.dec.com

----- End of Forwarded Message

From ab4el.com Thu Jun 16 15:26:08 1994
From: Gary M Diana <gmd@adm01.rfc.comm.harris.com>
Subject: FD, where's the FD?!

Hello All -

With Field Day (FD) almost upon us, I haven't seen much posted to the list as to who is operating under what callsign from where.

C'mon, let's here about... that way, YOUR call will stand out among the rest!

Brad (wb8ygg) and I will be operating under WB8YGG/2 from Dansville

NY, about 60 miles south of Rochester NY. We'll be on the following bands (but not simultaneously):

160m, 80m, 40m, 20m

All CW, all QRP, all HB

Battery power and wire antennas

We'll be using xtal and vfo controlled rigs, direct conversion
+ superhets

73 and hope to hear your signal.

- gary n2jgu

From ab4el.com Thu Jun 16 19:21:41 1994

From: Brien Pepperdine <pepperb@gov.on.ca>

Subject: Re: FD, where's the FD?!

Gary, the club I belong to, which is the Durham Region QRP Club, will be operating on FD on the HF bands. Our call will be VE3QDR (as in QRP Durham Region), and we will be operating basically across Lake Ontario from you, from our FD site NE of Oshawas, Ontario.

We should hear you, and you us, with no problems.

I have made a note of your FD call and hope to work you on as many bands as we can.

72 de

Brien Pepperdine

VE3VAW

Toronto, ONT

DR QRP

NorCal QRP

NE QRP (to be, as soon as they get the money in the mail)

From ab4el.com Thu Jun 16 22:32:17 1994

From: rossi@VFL.Paramax.COM

Subject: Re: FD, where's the FD?!

I plan to operate Field Day from the beach at Ocean City, NJ. 1B SNJ

Planning basically a repeat of last years operation except this year I will be on both 20 and 40 meters with an OHR Classic. Last year was 20 meters only.

I will be using a wire vertical supported from a kite set up right on the

beach only 100 ft or so from the ocean. I expect to be on the air from the start of FD until early Saturday evening (roughly sunset) and then setup again on Sunday for a few more hours... or as long as my battery holds out.

Now just pray for clear skies and steady winds...

Pete Rossi - WA3NNA
rossi@vfl.paramax.com
Unisys Corporation - Government Systems Group
Valley Forge Engineering Center - Paoli, Pennsylvania

From ab4el.com Thu Jun 16 18:54:41 1994
From: adams@chuck.dallas.sgi.com (Chuck Adams)
Subject: Field Day

Roy, W7EL, asks about field day and qrpers. Last year Jim Fitton or someone mentioned something about staying around for another hour after the big bang and working QRPers on the QRP ARCI freqs. I stayed by worked only one station before being told that the battery was low and I had a bad chirp.

How about it this year too. For an additional hour after the contest, some ragchewing with fellow QRPers and swap some lies. Of course, we'll hear those after the test too. :-)

dit dit
Chuck Adams K5FO CP-60
adams@sgi.com

From ab4el.com Mon Jun 13 15:47:31 1994
From: Andrew Comas <comas@dwcu03.enet.dec.com>
Subject: Field Day Logging Software

Last year for QRP Field Day we used a public domain MS-DOS software package which I thought was called W8???.exe. It was specific for FD. Does anyone what the name might be and where I might get it? (The laptop with it on it was stolen).

Heathkit Cantenna (?) Output

Does anyone know what the Heatkit dummy load phono output actually outputs? Is it an attenuated RF level or something else. I am looking for a way to use a transmitter as a signal generator to test out a receiver. I have misplaced my manual for the dummy load. Thanks. Bob AC400

From ab4el.com Fri Jun 17 11:55:52 1994
From: tech@cs.athabascau.ca (Richard Loken)
Subject: Heathkit Cantenna (?) Outpu

On my cantenna the rca jack is connected to a diode so I imagine it gives a rectified output suitable for dc meters. I can look it up.

Richard Loken VE6BSV, Systems Programmer - VMS : "...underneath those
Athabasca University : tuques we wear, our heads
Athabasca, Alberta Canada : are naked!"
** tech@cs.athabascau.ca ** : - Aurthor Black

From ab4el.com Fri Jun 17 10:02:42 1994
From: mallick@ausable.crd.ge.com (John Mallick)
Subject: Re: Heathkit Cantenna (?) Outpu

There's a resistive attenuator in there along with a small signal diode and a capacitor. So, what you get out of the jack is a DC level proportional to the RF voltage across the dummy load; you can convert that into a power level. It's a cheap RF voltmeter.

73,

John WA1HNL

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..... ..      ..... ..      ..... ..      ..... ..      ..... ..      ..... ..  
John A. Mallick WA1HNL                      E-mail: mallick@crd.ge.com  
GE Corporate Research and Development        Phone: (518)-387-7667 (W)  
Schenectady, NY 12301                       FAX:   (518)-387-6560 (W)  
..... ..      ..... ..      ..... ..      ..... ..      ..... ..      ..... ..
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"Work like hell. Tell everyone everything you know. Close a deal with a handshake. And have fun." --- "Doc" Edgerton

From ab4el.com Fri Jun 17 10:06:01 1994
From: "Kearman, Jim" <jkearman@arrl.org>
Subject: RE: Heathkit Cantenna (?) Outpu

It's a dc voltage roughly proportional to the RF voltage. That little box on top holds a diode, a cap and a resistor.

From: Bob Scott
To: Boatanchors; QRP
Subject: Heathkit Cantenna (?) Outpu
Date: Friday, June 17, 1994 9:02AM

Heathkit Antenna (?) Output

Does anyone know what the Heathkit dummy load phono output actually outputs?

From ab4el.com Fri Jun 17 11:18:51 1994
From: raymonda@EBay.Sun.COM (Ray Anderson)
Subject: Heathkit Antenna (?) Output

Bob,

It's been a long time since I've had anything to do with a Antenna, but if I remember correctly, The phono plug output was a DC voltage derived from a diode detector to give you an indication of relative RF power.

73's de WB6TPU
Ray (raymonda@uranium.ebay.sun.com)

----- Begin Included Message -----

Heathkit Antenna (?) Output

Does anyone know what the Heathkit dummy load phono output actually outputs? Is it an attenuated RF level or something else. I am looking for a way to use a transmitter as a signal generator to test out a receiver. I have misplaced my manual for the dummy load. Thanks. Bob AC4QO

----- End Included Message -----

From ab4el.com Fri Jun 17 10:09:21 1994
From: mstrong@raiders.micro.ti.com (Mike Strong)
Subject: Re: Heathkit Antenna (?) Output

Bob, if memory serves (it has been quite a while) it is a rectified DC output so you can use a voltmeter to measure power out. You might be able to open up the box on top of the lid and see if you can figure out what the circuit is. That would confirm or refute what my memory is telling me :-).

Hope this helps.

Mike Strong - KT5H

mstrong@micro.ti.com

From ab4e1.com Mon Jun 13 15:18:00 1994
From: adams@chuck.dallas.sgi.com (Chuck Adams)
Subject: Hey

Gang,

last week, while I was in CA, something happened during an electrical storm here in Dallas that caused my sendmail configuration file to change. It's just one of those quirky things of nature (I guess). :-)

Well, needless to say, it cost me dearly. Like, a bunch of messages that I sent were returned. I now have to go back through the think.com archives for last week and resend everthing, if I can think of what it was in the first place.

It just didn't end up a good weekend, as I was bumped and missed HamCom in the Dallas area. I was supposed to be there Saturday and didn't make it. My apologies to all and the inconvenience thereof. It wasn't pleasant for me either. I hate flying, since I have over 800,000 miles on AA, and 100,000+ on Delta. I have been bumped before, but why does it occur at the most costly time. Something to do with Murphy?

dit dit
Chuck Adams K5FO CP-60
adams@sgi.com

From ab4e1.com Fri Jun 17 19:04:17 1994
From: sehneg@austin.ibm.com (Sehne)
Subject: Increased sensitivity of SWR meter

I recently rebuilt the SWR meter portion of an MFJ matchbox which I intend to use primarily with my QRP rigs. Unfortunately the sensitivity is very poor at powers of <5W. The input transformer is a toroid with the primary being a screw through the center of the toroid & the center tapped secondary several turns of #30? wire. Can I increase the sensitivity by just adding more windings to the secondary, or is there a better approach.

I'm really hurting for a good way to match my antennas to various QRP bands without it. Any advice is greatly appreciated. Thanks, de N2KTY/qrp (Gary)

From ab4el.com Thu Jun 16 09:57:52 1994
From: mvjif@mvublr.att.com (James M Fitton +1 508 960 2577)
Subject: Inet & Clubs

Here is the updated list of clubs and representatives on QRP Inet.

THANKS to those who volunteered to be regional club reps.

Note: Many managers of regional clubs also hold office in
QRP-Amateur Radio Club International (ARCI).

QRP-ARCI Officers/BOD/Editors/Managers on Inet !

Mike, WA8MCQ	IDEA ED.QQ	Mike.Czuhajewski%hambbs@wb3ffv.ampr.org
Paula, WB9TBU	EDITOR QQ	gpfranke@uxa.ecn.bgu.edu
Myron, N8DHT	TREASURER	72530.1666@CompuServe.COM
Doug, KI6DS	BOD	dh@deneb.csustan.edu,
Jim, W1FMR	BOD	mvjif@mvublr.att.com
Mike, WB8VGE	MEMBERSHIP	73357.222@CompuServe.COM,
Chuck, K5FO	AWARDS	adams@chuck.dallas.sgi.com
Dave, NN1G	TECH.ED.QQ	Bensondj@aol.com

Regional club representatives:

George, G3RJV, Pres.& Ed.	(UK)	G QRP	g3rjv@gqrp.demon.co.uk
Rich, W0HEP, Pres. & Ed.	Colorado	QRP	W0HEP@aol.com
Paul, WB8ZJL, Contact	Michigan	QRP	prvalko@vela.acs.oakland.edu
Doug, KI6DS, Pres. & Ed.	NorCal.	QRP	dh@deneb.csustan.edu
Jim, W1FMR, Coord.	New Eng.	QRP	mvjif@mvublr.att.com
Chuck, K5FO, Pres. & Ed.	N.Texas	QRP	adams@chuck.dallas.sgi.com
Dave, NF0R, Contact	St.Louis	QRP	
			David.Gauding@stlug.cheswicks.toadnet.org

Send updates to :

73/72 Jim Fitton, W1FMR QRP-NE mvjif@mvublr.att.com

From ab4el.com Fri Jun 17 17:03:57 1994
From: mvjif@mvublr.att.com (James M Fitton +1 508 960 2577)
Subject: k3ta

Cameron, your adr bounced. Is it correct ? W1FMR

From: C=BAILEY%IS%211EIS@ANG193FS.ang.af.mil

From ab4el.com Thu Jun 16 17:13:09 1994

From: jrj@mbunix.mitre.org (Johns)

Subject: Keyer Emulation

Cameron asked which Super Keyer emulation works best. In my opinion I have had the best luck with emulation #6 which I find very comfortable. I'm sure that if you ask this question to 100 hams who use the keyer you will probably find that all 10 emulation modes are in use. I just played around with the keyer until I found one that suited me. If I were just learning to use an iambic keyer, I'd probably start out with the Curtis emulation as I suspect that you will find more shacks with Curtis based keyers than any other configuration. (My opinion based on what is in most of the QRP rigs on the market - ARK-4, MFJ, etc.)

Jim Johns KA0IQT
jrjohns@mitre.org

Opinions expressed are mine and not those of my employer.

From ab4el.com Fri Jun 17 08:19:08 1994

From: C=BAILEY%IS%211EIS@ANG193FS.ang.af.mil

Subject: KEYER EMULATION

Jeff,

Another name for emulation is imitation. The Super Keyer II will even emulate a straight key! Of course it is fun to send with a paddle in that mode. I have used a straight key for 15 years now. I have still not mastered it to send well at over 20 wpm. I just want to have the skill to also use a keyer.

72 de Cameron, KT3A

From ab4el.com Fri Jun 17 12:02:27 1994

From: B61395@awtims.fe.anlw.anl.gov

Subject: Keyer Emulation

Could someone address the subject of the various "modes" that keyers can emulate??? I didn't know there was anything more to this than push with

your fingers for dahs/push with your thumb for dits -- Honest!

diddleydahdidah (c) 1977 WB8RXN, Reproduced with permission.

73 (public domain), Bill (tm)(r) House of Windsor, KR8L (fcc)

M-98 (courtesy Michigan QRP Club)

(wparmley@anl.gov) (?)

good grief! (C. Schultz)

From ab4el.com Thu Jun 16 18:59:27 1994

From: Jeffrey Herman <jherman@uhunix.uhcc.hawaii.edu>

Subject: Re: Keyer Emulation

Gang:

Jim and Cameron have been discussing keyer emulation and the various settings. I can't seem to find an emulation control on my straight key. It does have a shorting switch but that's only to be used if you have to abandon a sinking ship (keeps the xmtr keyed so the rescue craft can DF the ship before the radio shack gets flooded).

What's 'emulation' mean, anyway?

Jeff NH6IL

From ab4el.com Thu Jun 16 11:38:37 1994

From: C=BAILEY%IS%211EIS@ANG193FS.ang.af.mil

Subject: KEYER EMULATION?

Gang,

Can I get some advice on which keyer emulation works the best for you? I have a Super Keyer II and it can do 10 different styles. It's own with dot or dash memory or both, Accukeyer with dot or dash memory or both, Curtis with dot or dash memory or both, and Iambic without dot or dash memory. I've only had about 1 years experience with it. Thanks es 72 de Cameron. dit ditwhat emulation was that??

From ab4el.com Fri Jun 17 11:18:33 1994

From: Mark J Schreiner <schreine@pogo.den.mmc.com>

Subject: Re: KEYER EMULATION?

I use an MFJ keyer with Bencher Paddles. It is I believe an Iambic keyer. I like it. It didn't take much getting used to. At one time I tried

an old bug & hated it, but lots of people love them. I am sure you will get lots of varied opinions on this topic, but they are all OPINIONS and PERSONAL PREFERENCES. Whatever works best for you or whatever you are used to will be your preference.

73s, de Mark, NK8Q/3

From ab4el.com Sat Jun 11 13:13:42 1994

From: "MYRON R. KOYLE" <72530.1666@CompuServe.COM>

Subject: LARGE NUMBER DIGITAL CLOCK

FYI:

After an absence of some time, Radio Shack has brought back a large number (1.8") LED digital clock that reads out in 12 or 24-hour format. 9v battery back-up.

NOTE WELL !!!!! IT IS NOT CATALOGUED YET ! So, don't look for it in their '94 catalogue.

Info: Radio Shack #63-748

"JUMBO-LED"

Digital Alarm Clock

\$24.99

72/73,

Myron N8DHT

From ab4el.com Sat Jun 11 14:57:43 1994

From: Jeffrey Herman <jherman@uhunix.uhcc.Hawaii.Edu>

Subject: Re: LARGE NUMBER DIGITAL CLOCK

Myron informed us of RS's new digital clock.

Well, I run QRP clocks: I have a sundial outdoors, and use a sand-filled hour glass for indoors...

Oh, I use an egg timer for 10-minute IDing during a QSO.

Jeff NH6IL

"Low-tech is a way of life for me"

From ab4el.com Fri Jun 17 15:02:02 1994

From: C=BAILEY%IS%211EIS@ANG193FS.ang.af.mil

Subject: List of Who Are You?

Jim,

You may add my name as a contact person for the "QRP Society of Central Pennsylvania".

Cameron, KT3A Contact.... QRP Society of Central Pennsylvania

From ab4el.com Mon Jun 13 10:45:17 1994
From: Dave Finley <dfinley@aoc.nrao.edu>
Subject: MFJ Portable Antenna

Hello:

Does anyone have any experience with the MFJ Portable Antenna?

I'm looking for an antenna to use on business trips. Most (nearly all) hotels have windows that don't open, so hanging a wire or a dipole seems to be out of the question.

I wonder if anyone has used the MFJ Portable Antenna in situations like this, and what their experience has been?

Also, what does this thing consist of and might something similar be built at less cost?

Thanks & 73,

Dave, N1IRZ
dfinley@nrao.edu

From ab4el.com Mon Jun 13 17:08:40 1994
From: Randall Rhea <randall@informix.com>
Subject: Re: MFJ Portable Antenna

=>

=>

=>Hello:

=>

=>Does anyone have any experience with the MFJ Portable Antenna?

=>

=>I'm looking for an antenna to use on business trips. Most (nearly all) hotels have windows that don't open, so hanging a wire or a dipole seems to be out of the question.

In a steel frame building like a hotel, just about any indoor antenna will

work poorly. If you can't hang a wire of of a window, you need to get the antenna at least on or very close to a window. Many hotels do have windows that open at least a crack ... enough to stick a wire out of.

=>

=>I wonder if anyone has used the MFJ Portable Antenna in situations
=>like this, and what their experience has been?

=>

=>Also, what does this thing consist of and might something similar
=>be built at less cost?

If you have an antenna tuner, stick a piece of wire out the window. Carry with you a 1/4-wavelength piece of wire for each band you work; this should be attached to the ground connector of the tuner. This ground counterpoise wire can be strung out on the floor. If you absolutely cannot put the wire outside, try looping it around the window, or at least around the wall where the window is located. Ask for a room with a view to the outside (not to an internal atrium). I use #18 insulated wire; wrapped up in a coil, it takes up almost no room in a briefcase. I use a little MFJ tuner.

```
=====
Randall Rhea                                Informix Software, Inc.
Client Services Engineer                    randall@informix.com
```

From ab4el.com Fri Jun 17 15:29:46 1994
From: "W. Daniel" <pandora!daniel@Think.COM>
Subject: MOSFET RF amplifiers

Hi Gang,

I am trying to build a MOSFET power amplifier for 20M using IRF511s and MTP3055Es. My expected output should be from 20 ro 40 watts. The question I have is, since I am anticipating use with CW only, should I go for Class AB, B or C operation? The thing is that I am trying to build this thing as compact as possible and I thought if I could get rid of the forward bias components, I might be able to make it smaller.

Supposing I am building a push-pull comfiguration, is it possible for me to get rid of the bias network altogether? I understand that in class C operation, I need more drive but that should not be a problem. I present the circuit below as an example. Please comment and advise.

```
feedback network
o-/\/\--||-----o-----o
|                _|d      |
```

```

      -----o-----?-----(|_ +Vcc |
RF in o-- (      g |s o o-- ----o to filter
          ) ( 0.1 uF | | ) (
          ) (--o--||---o Gnd o----o-||-o-----) (
          ) ( X      | | ) (
Gnd o-- (      g |s o-- ----o Gnd
      -----o-----?-----(|_ |
          | |d |
          o-/\--||-----o-----o

```

X is where the bias voltage should go, about +3v thereabouts. Is this necessary for "Class C" operation? Is there such a thing as "Class C" push-pull configuration?

? is where I would put either a ferrite bead or a 15 ohm resistor. Which is better suited to the task?

In terms of PCB layout, should I put the QSK relay nearer the input or the output end? I don't want to run the tracks all over but I don't seem to have a choice. Any ideas?

Is there also a possibility of implementing an automatic QSK switching using diodes instead of a relay? If so, how might I do this? How much power can the diodes handle anyway?

Please help me if you can. I think I already destroyed some MTP3055Es while experimenting and I don't have too many of them. Tks.

73,
Daniel
--

```

+-----+-----+-----+
| Daniel Wee | daniel%pandora@csah.com | ** Man needs more
| UUCP1.12b  | daniel.wee@f516.n600.z6.fidonet.org | than a new start, he
| SNEWS 1.91 | csah.com!pandora!daniel | needs a new heart! **
+-----+-----+-----+

```

From ab4el.com Thu Jun 16 20:50:39 1994
Subject: re 30-40 t-1 ?
From: Stan Goldstein <stan@cruzio.com>

Just finishing up building the 30-40 and have a question on the construction of t-1.
The manual says secondary is to be "closly wound" . Does this mean to spread out the primary windings over the whole coil , but group the secondary tightly together ?
Also the kit came with a piece of (single)ribbon cable but I dont

see where it is supposed to be used.
Thanks , de Stan N6ULU.

--

From ab4el.com Sat Jun 11 07:50:43 1994
From: James Speer <F_SPEERJR@ccsvax.sfasu.edu>
Subject: net sked?

>Hi Tom and Inet gang:
>
>NEN (Northeast) QRP CW Net meets at 8 am est, on 7.040 mHz, on Sat.
>mornings.
>72 W1FMR

Can anyone say whether this means 1200Z or 1300Z during the summer?

Thanks

Jim K5YUT

From ab4el.com Sun Jun 12 16:17:32 1994
From: Mike.Czuhajewski%hambbs@wb3ffv.ampr.org (Mike Czuhajewski)
Subject: Re: net sked?

The NEN QRP net on 7040 KHz on Saturdays meets at 8 AM local time on the east coast, regardless of daylight/regular time. The UTC/GMT/Z time shifts back and forth every six months, but the local, "real" time stays at 8 AM all year.

--

Mike Czuhajewski, user of the UniBoard System @ wb3ffv.ampr.org
E-Mail: Mike.Czuhajewski%hambbs@wb3ffv.ampr.org
The WB3FFV Amateur Radio BBS - Located in Baltimore, Maryland USA
Supporting the Amateur Radio Hobby, and TCP/IP InterNetworking

From ab4el.com Sun Jun 12 18:09:47 1994
From: janderson@polycom.com
Subject: NN1G in San Jose...

NN1G will be in the San Jose area this week. He has Monday and/or Tuesday evening free - would anyone like to join me in meeting him?

I'm leaning towards a Tuesday evening meeting, probably at the Red Lion Inn in San Jose (or environs).

Admittedly, this is very short notice, but, if you're interested, drop me an e-mail message, or, better yet, telephone me at work or home.

Cheers & 72!

Jeff, WA6AHL
janderson@polycom.com
415.964.6765 (home)
408.383.2827 (work)

From ab4el.com Mon Jun 13 20:27:16 1994
From: BHOWLE@delphi.com
Subject: NN1G Rig >\$40.@Dan's

I just received a flyer from Dan's small parts - he's offering the NN1G rigs at a summer special price of \$ 39.95 for the boards, air variable and board mounted componments.

yet another summer project!

From ab4el.com Fri Jun 17 08:49:01 1994
From: "W. Daniel" <pandora!daniel@Think.COM>
Subject: NN1G RIT corrections

Hi Gang,

Regarding the NN1G RIT circuitry, I have noticed some errors, the resistor near the bottom centre (lower leg of the pot) which is marked 10 should be 10k and not 10 ohms. There are no 10 ohms resistors in this circuit. I also forgot to mention the transistor part number, its a 2N3906. Sorry for those who have tried this got too engrossed with trying to make a decent circuit with ASCII.

73,
Daniel

--

```
+-----+-----+
| Daniel Wee | daniel%pandora@csah.com | ** Man needs more
| UUCP1.12b | daniel.wee@f516.n600.z6.fidonet.org | than a new start, he
| SNEWS 1.91 | csah.com!pandora!daniel | needs a new heart! **
+-----+-----+
```

From ab4el.com Fri Jun 17 09:13:11 1994

From: "JEFF M. GOLD" <JMG@tntech.edu>
Subject: Norcal 40

Pardon my ignorance, but do you need to paint the panels on the Norcal 40 BEFORE sending them to get silk screened?

thanks

73

Jeff, AC4HF

From ab4el.com Mon Jun 13 12:08:43 1994
From: burdick@interval.com (Wayne Burdick)
Subject: NorCal 40 Crystal matching

Jason,

[Doug -- good for next issue of QRPP?]

Here's the procedure for matching the NorCal 40 crystals.

Buy at least 6, at most 10, from Digikey. There is a price break at 10, and you can use the extras for a later project. Avoid surplus crystals unless you have a chance to test before you buy. Use the NC40 receiver BFO circuit as a test oscillator; an NE602 and the two caps on pins 6 and 7 are all you need, shorting pins 1 and 2 together to prevent RF pickup.

Pick the closest 4 crystals for the filter, the next closest one for the transmit oscillator, and the next closest one for the receive BFO. You can use a ham receiver rather than a counter. If your receiver isn't general-purpose, tune to the 6th harmonic at around 29.490MHz. It will be quite weak, so you'll need to drape a wire near the '602 and connect the other end to the receiver's antenna input. If you use a harmonic, remember to divide the result back down to the 4.915MHz range to see what the actual frequency of each crystal is.

When you test the crystals, also note the amplitude out of the crystal oscillator as a rough gauge of each crystal's "activity." This is best done with a high-impedance, low-capacitance probe connected to pin 7 of the NE602, possibly a scope probe or homemade 1N34 RF probe and DMM. This measurement can be quite coarse, say within 10%. Reject any crystal whose output is less than about 80% of the average. You will rarely come across such crystals, but when you do, they can cause problems.

73,
Wayne, N6KR

From ab4el.com Wed Jun 15 04:55:18 1994
From: FOXG@WCSUB.CTSTATEU.EDU
Subject: NORCAL construction problem

Well my NORCAL40 is complete... except it doesn't yet work! I've already discovered and corrected a number of construction goofs.

I need advice on a couple of things:

While finishing L9, I inadvertantly snapped some wire and could not go the full 62 turns. The rig now ops too high in frequency. Since I can't find any more #28 wire (only #26 or #30) can I substitute a different length and use one of those gauges?

Also, I get no output and no sidetone. Everything checks out fine to Q6. If I haven't installed the transformer backwards and everything else looks OK, is there a common substitute (i.e. something Radio Shack sells) for Q7?

We need this rig for field day, so I've got to get moving.

Any suggestions/help appreciated.

73, Geoff WA1U

FOXG@WCSUB.CTSTATEU.EDU

From ab4el.com Wed Jun 15 08:55:58 1994
From: Stephen Trier <sct@po.cwru.edu>
Subject: Re: NORCAL construction problem

> Since I can't find any more #28 wire (only #26 or #30) can I substitute a
> different length and use one of those gauges?

As I understand it, there's no need to use a different length. Grab whatever gauge looks like it will fit. Either #26 or #30 should work. If it carries a lot of current or if Q is absolutely critical, go with #26 because of its slightly lower resistance.

Changing wire size will cause some minute difference in the inductance, but it will be so small as to be swamped by the uncertainty of other components.

> ...is there a common substitute (i.e. something Radio Shack sells) for Q7?

What kind of transistor is it?

Stephen

From ab4el.com Wed Jun 15 23:40:33 1994

From: Mike.Czuhajewski%hambbs@wb3ffv.ampr.org (Mike Czuhajewski)

Subject: Re: NORCAL construction problem

You're quite right that small changes in wire size will make virtually undetectable changes in inductance. I proved that to myself, with the results reported in QSTs Technical Correspondence column last year, and also in the QRP Quarterly (the original two letters to QST before I condensed them for publication). You can get considerably more variation by spreading or compressing the windings than by changing wire sizes. Going up or down a couple sizes will not make any real difference, in the real world. 73 de WA8MCQ

--

Mike Czuhajewski, user of the UniBoard System @ wb3ffv.ampr.org

E-Mail: Mike.Czuhajewski%hambbs@wb3ffv.ampr.org

The WB3FFV Amateur Radio BBS - Located in Baltimore, Maryland USA

Supporting the Amateur Radio Hobby, and TCP/IP InterNetworking

From ab4el.com Tue Jun 14 12:11:56 1994

From: dh@deneb.csustan.edu (Doug Hendricks)

Subject: NorCal Info

Several newcomers have joined the list and have requested info on NorCal. Here it is again for all the "new guys on the block", thanks for joining us!!

Thank you for your inquiry about the Northern California QRP Club. NorCal was started in June 1993 by Jim Cates, WA6GER and Doug Hendricks, KI6DS. Our goal is to spread information about QRP and to promote building and homebrewing QRP rigs and accessories. We do not charge for memberships, but we do charge \$5 for a one year subscription to QRPP, the Journal of the NorCal QRP Club. Each issue is 72 pages in a 5 1/2" x 8 1/2" format. QRPP is published in March, June, September and December.

Members are issued membership numbers and we also usually do one or two club projects per year. The project for 1993 was the NorCal 40, a 2 watt, 40 meter transceiver with varactor tuning, RIT, AGC, and a superhet receiver. The kit was complete with custom designed case, knobs, connectors, silk screened pcboard, and all parts. We sold the first run of 100 for \$79, post paid. The second run of 100 sold for \$94 delivered. We are now selling partial kits which consists of the pcboard, varactor diode, case, standoffs, and special screws for \$25 postpaid in the US, \$30 foreign. The rig was designed by Wayne Burdick, N6KR, who has also designed the Sierra, and is the technical advisor for the club.

The project for 1994 is the Sierra, which is an all band cw transceiver that covers 150 KHz of each band. It uses band modules that plug in to a main board to change bands, and will be available from 160 through 10 meters, including all of the WARC bands. The kit sells for \$160 for the basic

radio without band modules. Band modules are \$25 each for complete kits on 80, 40, 30, 20, and 15 meters. Extra band module boards are \$7. It too, has a custom case, knobs, pcboards, all parts, RIT, AGC, and a double tuned superhet receiver that is hotter than a pistol. The Sierra will only be sold to club members, but it is easy to become a club member.

To join the club, send \$5 to Jim Cates if you want a subscription to QRPp. His address is Jim Cates, 3241 Eastwood Rd., Sacramento, CA 95821. By the way, the gang gets together for an informal meeting on the first Sunday of the month at the California Burger Restaurant at the Santa Rita exit of I-580 in Pleasanton. It starts at 11:00 AM and usually lasts for about 2 - 3 hours. No business meeting, no program, just show up and show and tell. If you have questions, let us know.
72, Doug, KI6DS

From ab4el.com Wed Jun 15 13:44:34 1994
From: mvjif@mvubr.att.com (James M Fitton +1 508 960 2577)
Subject: NYC

Anyone on QRP Inet live or work near New York City ?
I need information about apartments or rooms, for my recent college graduated daughter.

Also, got e-mail from Myron, N8DHT that the July ARCI Quarterly already at the printer.....

Congratulations to Myron and Paula, WB9TBU.....

Heard on Tues. nite 40m CW net (last eve.) that the new ARCI banners have been ordered. These can be borrowed by regional clubs planning to have a table or information booth at hamfests. (See WB2QAP)

Thanks
73/72 Jim Fitton, W1FMR QRP-NE mvjif@mvubr.att.com

From ab4el.com Wed Jun 15 18:06:06 1994
From: Mark J Schreiner <schreine@pogo.den.mmc.com>
Subject: Re: NYC

I work near Princeton, NJ and live about 10 miles south (cheaper) from there. It is expensive. The closer to NYC the more \$\$\$\$. I just bought a hamshack (house w/ 3 acres on top of a hill with lot of trees & few neighbors) out in the country about 1 hour away from work & will pay about the same (just a little more) for a mortgage. Couldn't afford to buy here or closer to NYC!

If your daughter would like to drive about 1 hour to NYC I might consider renting my extra room ;-)

73s es GL

Mark, NK8Q/3

From ab4el.com Thu Jun 16 00:11:18 1994

From: Mike.Czuhajewski%hambbs@wb3ffv.ampr.org (Mike Czuhajewski)

Subject: Re: NYC

The July issue of the QRP Q is at the printer? Let's hope this one turns out to be more reliable than the old one. I hope the nightmare is over. (Looking back over my file of QRP Qs, I noticed the October issue a year or two ago--my handwritten note on the cover said it was received on 27 Nov--and I'm one of the club officials who gets advance copies by first class mail! This is not the proper place to discuss dirty laundry, although I am not in the least hesitant to swap horror stories over the phone.)

--

Mike Czuhajewski, user of the UniBoard System @ wb3ffv.ampr.org

E-Mail: Mike.Czuhajewski%hambbs@wb3ffv.ampr.org

The WB3FFV Amateur Radio BBS - Located in Baltimore, Maryland USA

Supporting the Amateur Radio Hobby, and TCP/IP InterNetworking

From ab4el.com Tue Jun 14 20:55:54 1994

From: david@rmit.edu.au (David Taylor)

Subject: Re: Observations, torroids in commercial rigs

Hello Folks,

I've followed this list for a few weeks now. As one who is more interested in the technical side of radio than the operating side, I don't go on air very often but do a lot of listening. I am fascinated at the moment by the DX window on 75 metres, though my novice HF privileges don't permit me to use the segment.

Regarding technical discussions - apart from talk on antennas and packet operating procedures - I just don't hear any in this part of the world. That's why I like mailing lists such as this!

I was wondering, as I was putting turns of fine wire on a tiny toroid, whether they are used in many commercial rigs, or whether the obvious manufacturing difficulties make solenoid coils more attractive for mass production. We homebrewers may have a real advantage there!

By the way, I am practising my morse to get a full call.

David

VK3JKP

David Taylor
RMIT (Bundoora Campus)
david@rmit.edu.au

From ab4el.com Mon Jun 13 12:28:56 1994
From: janderson@polycom.com
Subject: Parts for 40-40...

I have the 40-40 and 30-40 kits on order - does anyone know what other parts I'll need to buy to finish them up (variable caps, etc.?). Also, what size Ten-Tec case should I use?

I'd like to get these parts before the kits arrive...

Thanks & 73,

Jeff, WA6AHL

From ab4el.com Mon Jun 13 15:04:37 1994
From: ARDAI@MAVEN.dnet.teradyne.com
Subject: Re: Parts for 40-40...

To complete a 40-40 (or 30-40) kit, you need to add a 5K RF gain pot, a 100K tuning pot (used as a divider, so anything > 10K will work with a bit more current draw) and connectors for DC, antenna, key, and phones. The board is 3x4 inches, and you will need to leave a bit of space on the front and back for connectors and controls. I built mine in a DEC RS232 switchbox with lots of room to spare. Maybe I'll add a pair of gel cells...
/mike

n1list@netcom.com

From ab4el.com Fri Jun 17 00:20:09 1994
From: Jeff Jones <jeffj@crl.com>
Subject: Phone QRP!

I was playing around with my Atlas 210X on 20 meters today. Due to my power supply being only 5 amps I had the SSB power turned down to 10 watts. I heard a weak station north of Seattle calling CQ and just for the heck of it I called him back. He came right back to me! We chatted for a minute and then we got splattered big time by a big gun. So when he came in the clear I asked him to move down 5 right as the big gun

started to transmit once again. Figuring that he couldn't hear me through the QRM, I turned off the rig. About 20 minutes later I get a call from a friend of mine, N6PDX, he asked "Were you on 20 meters a while ago?" I said yes and that I was running 10 watts at the time. He goes "Oh really" and starts laughing. He said he heard the other station was still trying to get a hold of me. When he didn't hear me reply he came back to him and said I was a friend of his. They chatted a bit and then he called me at home. He got a real kick out of my 10 watts! Heck, so did I! 8-)
I can't wait to get on the air and work some DX!

Jeff AB6MB
jeffj@crl.com
10 watt SSB, whoa!

From ab4el.com Fri Jun 17 09:58:15 1994
From: mvjf@mvubr.att.com (James M Fitton +1 508 960 2577)
Subject: Pres. & Ed.

Incredible,

There are now 7 folks registered, who are either presidents or/and editors of 7 different QRP clubs on QRP Inet.

Instant communication with the some of the most rad shakers, do-oers, and communicators in QRP !

Here is the latest addition for our RC (Regional Club) list :

Vikki, WV9K, Pres. & Ed. IL	QRP	vikki@seastar.org
		vikki@witch1.seastar.org

What should we do with all this power ?

72 W1FMR

From ab4el.com Wed Jun 15 09:45:29 1994
From: teda@meaddata.com (Ted Albert)
Subject: QRP ARCI Membership

I joined QRP ARCI at the Dayton Hamfest this year. Someone was using the computer at the time, so they could not issue me a membership number. Now it is June and I haven't received a number yet. Is there a bit of a backlog for such things right now?

73 de Ted, KF8EE

From ab4el.com Wed Jun 15 16:01:43 1994
From: Mark J Schreiner <schreine@pogo.den.mmc.com>
Subject: Re: QRP ARCI Membership

I had the same problem with the Michigan QRP Club at the Dayton Hamfest. I was doing a renewal of a lapsed membership and did not need another membership number, but reused the old one. I have as yet to receive a newsletter from them. It just dawned on me the other day about that. I even knew the guy at the club table (but maybe he didn't remember me!). Well, I am still waiting.
GL & 73s,
de Mark, NK8Q/3

From ab4el.com Wed Jun 15 22:57:23 1994
From: prvalko <prvalko@vela.acs.oakland.edu>
Subject: Re: QRP ARCI Membership

On Wed, 15 Jun 1994, Mark J Schreiner wrote:

> I had the same problem with the Michigan QRP Club at the Dayton Hamfest. I
> was doing a renewal of a lapsed membership and did not need another
> membership number, but reused the old one. I have as yet to receive a
> newsletter from them. It just dawned on me the other day about that. I
> even knew the guy at the club table (but maybe he didn't remember me!).
> Well, I am still waiting.
> GL & 73s,
> de Mark, NK8Q/3
>

Mark, I forwarded your message on the the club secretary. Sorry for the problem, we'll get you set up in a jiffy. Pse remember that the M-QRP newsletter only comes out quarterly.

73 =paul= wb8zjl M-QRP #899
***** unofficial liasion for M-QRP club to the net *****

From ab4el.com Thu Jun 16 09:17:14 1994
From: bcieslak@mkelan5.remnet.ab.com (Brian Cieslak)
Subject: QRP CLUB Memberships

Well Now that I got that NORCAL40 running the QRP fever is once again running rampant through my body.....Thanks NORCAL, for putting together the kit...It

was a hit at the last radio club meeting.

Its been a few years since I renewed my QRPARCI membership (#4641) es I would like to to so again...Does anyone have the particulars?

Also Need info for joining other clubs like NORCAL QRP club es Michigan QRP CLUB.I have to congratulate the representative NORCAL had at Dayton..Everyone from the W/K ARC of Greater Milwaukee who went came back a member. es they're not even on the internet!

73,
Brian - AE9K

From ab4el.com Fri Jun 17 17:22:56 1994
From: dh@deneb.csustan.edu (Doug Hendricks)
Subject: QRP CLUBS

Gang,
First of all, NorCal is not the third largest QRP club, that honor belongs to the Michigan club, which has about 13 or 14 hundred members I think, maybe Paul can correct me, but at least that many. But who is counting? It does not matter how big the club gets, just that you have an active club. This is a fun hobby, and too many times people forget that. I would be more than happy to help anyone form a club, but I am not sure that I am the one to ask. Jim Fitton is my personal club guru, and he is the resident expert along with George Dobbs in England.

Here is a simple formula for a QRP Club. You need at least 3 key people, the Coordinator, a newsletter Editor, and a Technical Advisor. Those positions are filled in NorCal by:

Coordinator: Jim Cates, WA6GER

Newsletter Editor: Doug Hendricks, KI6DS

Technical Advisor: Wayne Burdick, N6KR

[Note that this is not original, but from Jim Fitton, W1FMR, who told it to all of us at Dayton in 1993.]

Jim's job is to make sure that everything gets done. He is very organized and thorough, as those of you who have delt with him by now know. He is the contact for correspondance, orders of kits, new members, etc. Jim is very, very patient and a kind human being who loves to help people.

My job is to edit and publish QRPP. I go after information and articles aggressively. The purpose of QRPP is to publish and share pertinent QRP information that has not been widely distributed previously. Some of my sources are internet, personal contacts (many made at Dayton, Livermore, and the Foothill hamfests), club meetings, other club newsletters, and things that show up in the mail. I think that it is neat to get someone to publish

who has something new to offer. It accomplishes two things, one it preserves it for history, and it makes others aware of the idea, so that they can use it for their particular applications. One of the things that I insist on is that permission be obtained for publication of all articles. That is only fair and good manners. Some of the things that I think a good club journal has are:

1. On Time!! (ARCI horror stories abound!!) Fix a time for mailing and stick to it. If you want to bulk mail, contact me and I will tell you some "hints from experience".
2. Use the same font through out the journal. Don't hand copy schematics, don't just photocopy material, retype it in.
3. Decide upon a format and don't change. QRPP is the size it is because that is the easiest size to keep and store. (I stole the idea from George Dobbs).
4. Print articles of wide interest. Also, try to have various types of articles so that you will have something of value to all members.
5. Print legible schematics [QRPP needs to work on this, and I am]. Do not use hand drawn schematics. There is a great program called KeyCad that costs \$19.95 and draws wonderful schematics. If you can't afford that, you can't afford to put out a club newsletter! Take pride in the appearance of your work.
6. Be prepared to take criticism. Some of it is helpful, some of it is cruel, but if you are trying to do the best job that you can, you will sleep at night. Take the useful hints and apply them, throw the cruel stuff out of your mind and consider the source.
7. Search out articles. Make it easy to submit. Offer to take it in any format, you can clean it up and make it useful. Ask others to write for you. Suggest articles to qualified people. It works wonders, just look at QRPP.
8. Don't be concerned with size. If you have 8 pages of quality info, so be it. Go for quality.
9. Be prepared to spend your own money on the newsletter. I do it because I enjoy it and I get satisfaction out of it. Every newsletter editor that I know spends his own money on his journal.
10. Be active. Go to meetings, hamfests, swapmeets, ham stores. Get on the air. Be visible. It is fun, and you never know when or where the next story is coming from.
11. Have FUN. This is a hobby. Don't worry about small things, just

the things that you can control.

The technical advisor for NorCal is Wayne Burdick. He not only designs the club projects, even more importantly, he helps those with problems get their rigs on the air. I know of many first time builders that Wayne has spent hours of his time helping. Every club needs someone to help those who are stumped with a problem. WE WANT TO ENCOURAGE BUILDING!! NorCal does it by providing kits at a low price, technical help, and by providing a monthly place for members to show off what they have built. You know there are 2 ways to show off your gear in ham radio. One is to do it on the air, and the other is to take it to a meeting and let everyone eyeball it. Wayne also helps me with advice on QRPP technical matters.

QRP Clubs need to have a philosophy or a purpose in being, or it will die. Jim Cates said it well when he stated that a club must provide something for every member, or there will be no members. We use a strange approach, in that NorCal has no officers, agenda, or official business meetings. Every member is equal. If some one has an idea he does it. Say that some member wanted to start a 75 meter NorCal net at 3.980 on Sunday evenings at 9:00 local time, he would announce it and do it. That is how it works. Jim and I both believe that we don't have time to feed egos, either our own or anyone elses. NorCal's philosophy or purpose is to have fun. That is it. We accomplish this with yearly club projects, monthly meetings, and small get togethers. QRPP is published to help the members of the club communicate and to give them something physical that they can have.

Club projects are done to bring the members together. It is far more fun to build something that a friend has built than to go it alone. First of all you have a source of help, and secondly, it is neat to get ideas on how to do projects. So far, I would say that at least half of our members have built or purchased a NorCal 40 or Sierra kit. Many have also built the digital display. This was all made possible by the club. Club projects do not have to be original designs either. You can take a design from any of the published ones and put together kits of parts. Order the parts in quantity, and you will all save. For example, let's say that you wanted to do a parts kit for the Neophyte receiver. All that you have to do is make a list of the needed parts, order them and then distribute them. Far circuits makes the boards, and it is easy to do.

Basically that is what I know about clubs. If you have specific questions, send me email and I will try to answer them. 72, Doug, KI6DS

From ab4el.com Fri Jun 17 11:34:01 1994
From: LVE@mica.inel.gov
Subject: QRP Field Day

All field day operations that I have particaped in the last few years have been QRP. An interesting observation: I seem to have better luck answering

calls from weak than strong stations -- even ones I can barely hear! Could it be the QRO types refuse to recognize any signals below S9? Or maybe their cooling fans make too much noise... Don't have much luck calling CQ-FD; seems like everyone is calling and no one is listening!

I'll be operating this year from a small hill east of Idaho Falls, ID (elevation about 5,100 ft above MSL) using a TenTec 509, Heath HW-9, and whatever else shows up. For power I'll be using a deep cycle RV battery feed by a 20W solar panel. Antennas will be a trapped dipole for 10/15/20 and a random wire for other bands. May get some help from another local QRPer; otherwise will be on my own. I plan to operate mostly CW, but will also be on SSB if things get slow (or if I work 'em all... HI).

73E-2, Larry W1HUE/7

"Real QRPers don't use beam antennas..."

From ab4el.com Sun Jun 12 20:55:39 1994
From: swart@curry.shr.dec.com (Mark Swartwout)
Subject: QRP New England Field Day Plans

This year, as for the last two years, the New England QRP club will operate Field Day from the Princeton Massachusetts Light Department Wind Farm on the West slope of Mt Wachusett. This is an excellent site that always produces good results.

We will be operating Class 3A Battery, and of course, operate each station at 5 Watts or less. Our call will be W1FMR.

We meet at the site on Saturday morning to set up antennas and stations. Everyone brings their own food and kitchen gear. There is plenty of room to set up sleeping tents away from the stations. Nothing is elaborate, but we have a good time.

We have about a dozen operators signed up, but there is always room for more. If you would like to operate this premier event with us, or if you would like more information, please contact me as soon as possible.

73 de Mark, NX1K
508-842-3174
swart@shr.dec.com

From ab4el.com Wed Jun 15 15:08:47 1994
From: "Evert Halbach" <CS-ERH@nich-nsunet.nich.edu>
Subject: QRP Pwr Measurement

Getting tired of E2/R with RF Probe es assuming exactly 50 ohms

impedance, etc. etc. I would like something I could just look up at and tell how much power I'm running.

What do you guys use to check output power of your QRP rigs?? I was thinking about either building a small wattmeter or purchasing an HF-5 watt element for the Bird Wattmeter. Think I saw an article in QST a while back with a simple QRP wattmeter....

Any suggestions?????????????

73 de WA50JI Evert

Evert R. Halbach WA50JI
Internet - cs-erh@nich-nsunet.nich.edu
Phone - (504) 448-4999
Snail - P.O. Box 2168 Thibodaux, La. 70310

From ab4el.com Thu Jun 16 00:11:30 1994
From: Mike.Czuhajewski%hambbs@wb3ffv.ampr.org (Mike Czuhajewski)
Subject: Re: QRP Pwr Measurement

I built the W7EL QRP wattmeter from a February QST of several years ago and it's really neat; top scale of 10 watts, lowest scale 100 milliwatts full scale. Oak Hills Research has a kit which is based on it (although it uses the directional coupler from the GQRP Clubs Stockton design). As for a 5 watt element for a Bird wattmeter, I believe the smallest one they make which covers HF is a 50 watt slug; you have to go higher in frequency to get lower power slugs. 73 de WA8MCQ

--

Mike Czuhajewski, user of the UniBoard System @ wb3ffv.ampr.org
E-Mail: Mike.Czuhajewski%hambbs@wb3ffv.ampr.org
The WB3FFV Amateur Radio BBS - Located in Baltimore, Maryland USA
Supporting the Amateur Radio Hobby, and TCP/IP InterNetworking

From ab4el.com Sat Jun 11 15:26:53 1994
From: Jeffrey Herman <jherman@uhunix.uhcc.Hawaii.Edu>
Subject: Re: QRP QSK and relay(s)!

Jack: Thanks so much for posting the QSK switching circuit. But I wonder how much delay there is between keydown and the xmtr itself keying - if monitoring the xmtr through the (antenna-less) rcvr will a time lag be noticed? I guess if it's milliseconds no one would notice...

.73,
Jeff NH6IL

From ab4el.com Thu Jun 16 13:07:52 1994
From: burdick@interval.com (Wayne Burdick)
Subject: Re: qrp-digest V1 #7

Geoff,

>...inadvertantly snapped some wire...

You can use just about anything at this frequency (vfo operates down around 2MHz). Even small insulated hookup wire will do. You can overlap the other winding, but you may have to cut and try to get it down to the proper frequency. Let me know how it goes.

>Also, I get no output and no sidetone...

If you think your Q7 is fried, you can substitute a 2N3553, 2SC799, or MRF237 (although the latter has collector and emitter reversed--note instructions in the manual). If you can't find any of these, second-best transistors include the 2N3866 and 2N3053, in that order. You'll get less power out, probably, and a bit less efficiency.

If you can't get it working, call me at 415-354-0928 (daytime) or 415-592-2700 (night/weekend) and I'll help you out. Maybe we can find someone in your area with test gear.

73,
Wayne

From ab4el.com Thu Jun 16 12:12:31 1994
From: James Speer <F_SPEERJR@ccsvax.sfasu.edu>
Subject: QRPARCHI

Don't want to impose, but if there is someone in the group who is also an officer of ARCI, could you let the record-keepers know about a typo in my records?

My certificate came recently. It has my correct name, and M# 8513, but the call is wrong (bet it's my bad handwriting).

The call shown in K5UT. Although I'd kill (or at least maim slightly) to have that call, my actual call is K5YUT.

Thanks & 73!
Jim Speer
K5YUT

From ab4el.com Fri Jun 17 08:49:00 1994
From: "W. Daniel" <pandora!daniel@Think.COM>
Subject: R1, R2, T1?

Hi,

Pardon me for my ignorance but could someone enlighten me on the reasons why the R1 and R2 are such hot topics? Is there something unusually good about the performance of these two receivers? What about the T2?

73,
Daniel

--

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+-----+-----+
| Daniel Wee | daniel%pandora@csah.com | ** Man needs more
| UUCP1.12b | daniel.wee@f516.n600.z6.fidonet.org | than a new start, he
| SNEWS 1.91 | csah.com!pandora!daniel | needs a new heart! **
+-----+-----+
```

From ab4el.com Sun Jun 12 23:36:37 1994
From: N8ET@delphi.com
Subject: R1/R2/T2 Available

June 13, 1994

In the past few months there has been some discussion on the QRP list about the difficulty of getting PC boards/kits of parts for the direct conversion gear published in QST by Rick Campbell - KK7B. That is about to change....

At the Dayton Hamvention this year Rick and I spent some time talking about the possibility of Kanga US producing and marketing kits for the R1, R2, T2, and miniR2 (unpublished) projects. Since that time we have worked out the details, and I am currently trying to get parts, documentation, etc., ready to go. I hope to be ready to ship in the next 4 weeks or so. My first order for parts (so I can build the kits!) is going out Monday morning. I like to build the kits I sell before I sell them so I know they work. Assuming they work, and I have no reason to think they won't, I will then order stock for the first run of kits.

This week I plan to get a good handle on what my costs will be so I can price the kits, and then I can start taking orders. If you are interested - please let me know. If there is enough immediate interest, I would like to offer the readers of the QRP list a reduced price for an initial order to help me with the up front \$\$\$ it is going to take to get this project started. Drop me an e-mail note at n8et@delphi.com and I will post you the

pricing info directly rather than on the list. There are several people who have already contacted me, and I will be notifying them directly this coming week also.

For those of you interested in the boards only - I will be pricing them at the same price Rick did - \$10 for the T2, R1, and miniR2 boards, and \$20 for the R2 boards. Include \$3.50 to cover shipping costs. I will take orders for those anytime - I will be ordering stock from Rick this week. Please note - I think he is out of the R1 board, so there may be a delay on that one. My address is:

Bill Kelsey
3521 Spring Lake Dr.
Findlay, OH 45840
419-423-4604

The phone is a line into my shack, and will have an answering machine on it "real soon now", but at present will get answered only in the evenings when I happen to be in the shack. Try between 6 - 11 pm eastern, or anytime during the day on the weekends.

For those of you looking for more info on the R1, R2, and T2, look in the QST of Aug. 92, and Jan., Apr., May 93. There is enough there to keep you busy reading for a couple of days.... Rick loaned me his Classic 40, and it is everything the article says it is.

This note has been posted only on the QRP list in order to keep the initial response to something I hope I can manage. Rick was literally buried when he began producing boards, and that is why he got away from the production end. He tells me he has about 300 unanswered inquiries that he is sending me to take care of. If you are interested - get something to me before I tackle that stack!

72/73 - Bill - N8ET
Kanga US
n8et@delphi.com

From ab4el.com Thu Jun 16 00:11:26 1994
From: Mike.Czuhajewski%hambbs@wb3ffv.ampr.org (Mike Czuhajewski)
Subject: Re FT243 crystals

You might want to try CW Crystals in Marshfield, MO; they have them at reasonable prices. Look in the classified ads in QST. Sometimes they have a rather lengthy and informative ad, sometimes they just say to

check their ad of a few months ago, but they're usually there. 73 de
WA8MCQ

--

Mike Czuhajewski, user of the UniBoard System @ wb3ffv.ampr.org
E-Mail: Mike.Czuhajewski%hambbs@wb3ffv.ampr.org
The WB3FFV Amateur Radio BBS - Located in Baltimore, Maryland USA
Supporting the Amateur Radio Hobby, and TCP/IP InterNetworking

From ab4el.com Thu Jun 16 19:40:26 1994
From: janderson@polycom.com
Subject: Re: Re: construction methods

> At least in the digital world, wire-wrap is useless for clock speeds over a
> couple of MHz...

Over the years I've prototyped a number of circuits with wire-wrap that ran at "high" clock rates (13.5, 14.3, and 27 MHz, for example) and have had very few wirewrap related problems with either the prototypes or later implementation as PCBs. As an example, one of the boards had well over 200 digital IC's over an area of probably 200 sq. inches, with quite a few of them processing video data at 14.3 MHz. The trick is to place the clock generator in a central location to the highest speed logic, keep the clock runs as short as possible (minimize daisy-chaining), terminate clock lines, and don't skimp on clock drivers - good design practice whether doing PCB, wire-wrap, or dead-bug style design.

You can run wire-wrap at fairly high speeds and still maintain the integrity of clock and data waveforms, just be sure to pay attention to detail, and keep those runs short!

- Jeff, WA6AHL

From ab4el.com Wed Jun 15 08:09:32 1994
From: C=BAILEY%IS%211EIS@ANG193FS.af.mil
Subject: re: Re: Observations, torroids in commercial rigs

On a recent visit to the "Ten-Tec" manufacturing plant in Tennessee, I asked the tour guide, "How do you folks do your toriods?". He told me that they are wound by hand because a machine just can't give you the same quality as the human hands! I always appreciated those things that are crafted by hand. I have been out of the private sector for 15 years now. Are there machines that wind toriods? (If in Tenn, I recommend the time to visit Ten-Tec).

de Cameron, KT3A.

From ab4el.com Wed Jun 15 09:10:38 1994
From: prvalko <prvalko@vela.acs.oakland.edu>
Subject: re: Re: Observations, torroids in commercial rigs

I got to visit Ten*Tec last month.

After the tour, make sure to ask to see the "museum." They have a room off to the side that has a couple operating positions and a shelf with quite a few of their older radios. Several people have confirmed that the "tour" does NOT take you into that room unless you ask to see it.

=paul= wb8zjl

From ab4el.com Wed Jun 15 14:29:55 1994
From: Mark J Schreiner <schreine@pogo.den.mmc.com>
Subject: re: Re: Observations, torroids in commercial rigs

Yes, there are machines that wind torroids. I work at a plant that builds satelllites (commercial communications types, et al), and we have a machine to do it. If you would like more information about the machine or its processes I could look into it for you. Send me a reply if you need more information. I also appreciate things that are crafted by hand, but unless proper fixturing and processes are implemented the quality can vary greatly from one operator to the next.
73s de Mark, NK8Q/3

From ab4el.com Wed Jun 15 23:30:15 1994
From: Mike.Czuhajewski%hambbs@wb3ffv.ampr.org (Mike Czuhajewski)
Subject: Re: re: Re: Observations, torroids in commercial rigs

You asked if there are machines that wind toroids. The answer is yes; I've seen them advertised in some of the electronics trade journals. Would you want to buy one for home? I rather suspect the cost would be prohibitive! I don't mind winding the things too much, but bravo for the kit dealers who supply all coils pre-wound! --de WA8MCQ

--

Mike Czuhajewski, user of the UniBoard System @ wb3ffv.ampr.org
E-Mail: Mike.Czuhajewski%hambbs@wb3ffv.ampr.org
The WB3FFV Amateur Radio BBS - Located in Baltimore, Maryland USA
Supporting the Amateur Radio Hobby, and TCP/IP InterNetworking

From ab4el.com Fri Jun 17 13:50:29 1994
From: janderson@polycom.com
Subject: Reid Simmons, where are you?

Sorry to bother the rest of the list with this, but my mail keeps

getting bounced...

Reid:

I'm very interested in the manual for the EICO 710, but my reply to you keeps getting bounced back as undeliverable. I'm using simmons@zds.com - is this correct? It keeps coming back!

Nonetheless, let me know the reproduction and postage costs, and I'll get you a check in the mail.

Many thanks!

Jeff, WA6AHL

From ab4el.com Fri Jun 17 15:29:40 1994
From: "W. Daniel" <pandora@daniel@Think.COM>
Subject: Resistive attenuators

Hi,

Can anyone tell me how I can design a resistive attenuator for 50 ohms. I want to drop 4-5 watts to about 1-2 watts into 50 ohms so I can drive a MOSFET amplifier. I don't want to overdrive it with 4-5 watts. Is there an easy way to do this?

Another thing, regarding the stability of switching MOSFETs used as RF amplifiers, it is common to put a low value resistor at the gate of the transistor. Could I slip a ferrite bead over the gate leg of the transistor instead? Will this help avoid parasitic VHF oscillations? Which works better? Ferrite bead or low value resistor?

Lastly, should a QSK relay be closer to the input of the amplifier or to the output of the amplifier?

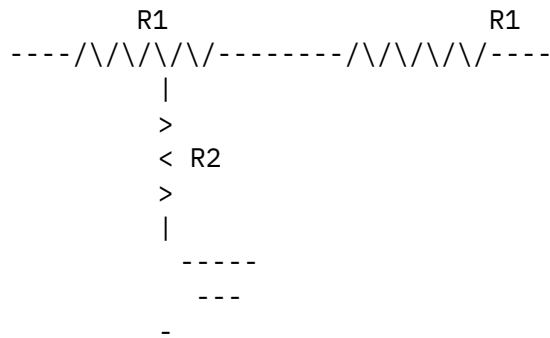
73,
Daniel
--

```
+-----+-----+
| Daniel Wee | daniel%pandora@csah.com | ** Man needs more
| UUCP1.12b | daniel.wee@f516.n600.z6.fidonet.org | than a new start, he
| SNEWS 1.91 | csah.com!pandora@daniel | needs a new heart! **
+-----+-----+
```

From ab4el.com Fri Jun 17 16:11:55 1994
Subject: Re: Resistive attenuators
From: "John F. Woods" <jfw@ksr.com>

ARRL Handbook, "Test Equipment and Measurement".

Since I have it handy, a 6 dB T pad would be



R1 = 16.6 ohms, R2 = 66.9 ohms. I would suspect 2W (metal oxide) resistors should suffice for all, but this should be analyzed more carefully.

From ab4el.com Fri Jun 17 17:33:11 1994
From: raymonda@EBay.Sun.COM (Ray Anderson)
Subject: Re: Resistive Attenuators

<daniel%pandora@csar.csah.com> writes:

>Hi,

> Can anyone tell me how I can design a resistive attenuator for 50
>ohms. I want to drop 4-5 watts to about 1-2 watts into 50 ohms so I can
>drive a MOSFET amplifier. I don't want to overdrive it with 4-5 watts. Is
>there an easy way to do this?

... paragraph deleted ...

>Daniel

Daniel,

First figure out how many dB of attenuation you need.

$$\text{dB} = 10 \times \log P_1 / P_2$$

$$\text{so: dB} = 10 \times \log (2\text{Watts} / 5\text{Watts})$$

$$dB = 10 \times \log (.4)$$

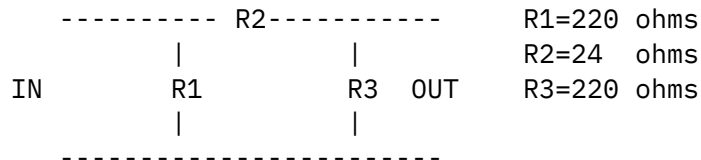
$$dB = 3.97 \text{ dB} \quad (\text{Call it } 4 \text{ dB})$$

Now calculate your resistor values:

1. Either calculate the #'s from equations
2. Look up in a table
3. Let your computer crunch the numbers.

Real engineers choose option #3 these days :)

For a 50 ohm 4 dB pi attenuator:



Since you are driving it with 5 watts (+37 dBm) the computer tells us that the resistors will be dissipating the following powers:

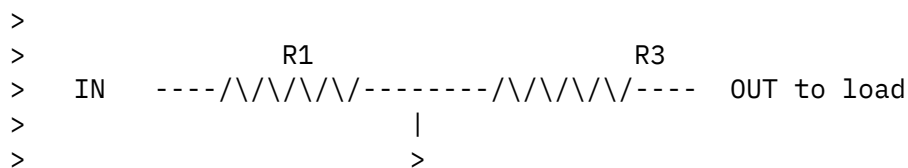
R1: 30.5 dBm (1.12 watts)
 R2: 31.6 dBm (1.4 watts)
 R3: 26.5 dBm (446 mw)

So figure on at least 2 watt resistors for R1 and R2 and at least 1W for R3 .

73's de WB6TPU
 Ray (raymonda@uranium.ebay.sun.com)

From ab4el.com Fri Jun 17 19:23:52 1994
 From: xenolith@halcyon.com (Kevin Purcell)
 Subject: Re: Resistive attenuators

I took the liberty of modifying this diagram:

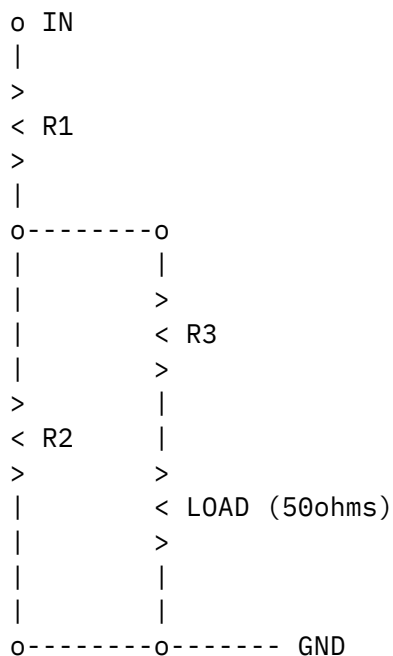


```
>                                     < R2
>                                     >
>                                     |
>                                     - - - - -
>                                     - - -
>                                     -
>
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>R1 = R3 = 16.6 ohms, R2 = 66.9 ohms. I would suspect 2W (metal oxide)
>resistors
>should suffice for all, but this should be analyzed more carefully.
```

Just use Ohms law (you know the input voltage derived from the output power of the TX) and the impedance of the load (50 ohms) which is connected to the output to ground.

You will get the following paragraph if you redraw the T as a voltage divider (for that is all it is -- though the values have been carefully choosen):



So you have $((R3 + 50) \parallel R2) + R1$ is the resistance seen by the input.

Calculate voltages around the network using ohms law.

Calculate powers disipated around the network.

Spec the resistors (most of the power will be dropped in R2, less in the R1 and much less in R3).

So you see those attenuator tables aren't magic, just high-school physics!
The derivation of the pi network is an exercise for the student (go on DO
IT!)

73

Kevin Purcell, N7WIM / G8UDP
xenolith@halcyon.com "Organising programmers is like herding cats"
(206) 649-6489

From ab4el.com Sun Jun 12 14:59:21 1994
From: hideg@qmserv.erim.org (Steve Hideg)
Subject: Re: Sierra Brochure

Reply to: RE>Sierra Brochure
You can download pictures of a completed Sierra (in gif or jpeg format)
from

ftp.erim.org

cd to hideg/qrp/dayton94

--Steve Hideg, N8HSC
hideg@erim.org

From ab4el.com Mon Jun 13 17:36:07 1994
From: Tom Kerns <tkerns@seaccd.ctc.edu>
Subject: Sony 2010 for sale

Folx -

I have a virtually new Sony 2010 short wave receiver for sale.
Actually it is my Dad's. Mother got it for him (on my recommendation),
but he didn't ever use it. So it's still in its original box, all
original packaging, etc. They're asking \$300 for it, firm.

Does anyone know a good place here on the Internet for
advertising such a thing?

- Tom AA7ZG

Dr Tom Kerns, Professor of Philosophy
North Seattle Community College
9600 College Way North
Seattle, WA 98103
email: tkerns@seaccd.ctc.edu
voice/voicemail: (206) 528-3827
FAX: (206) 527-3734
Amateur radio callsign: AA7ZG
Packet: AA7ZG @N7DUO.WA.USA.NA

Fly Fishing is The Answer.

From ab4el.com Wed Jun 15 14:59:19 1994
From: GroverC@gvgadg.gvg.tek.com (Grover Cleveland)
Subject: Sources of FT-243 Crystals?

Well I have acquired a couple of xtal controlled qrp rigs and now find the need for a few crystals on the popular qrp frequencies.

Miraculously I have one for 7140. Where do I go to find a fundamental crystal for 30 meters? Is 10.106 the right frequency? I'd also like to find 21.040 and 7015. Is it time to grind my own? (Haven't done that in years)

.0073

Grover Cleveland Instructional Designer, The Grass Valley Group, Inc.
Internet: groverc@gvgadg.gvg.tek.com Radio: WT6P@KE6LW.#NOCAL.ca.us.na
Voice: (916) 478-3153 DoD:7388 Fax: (916) 478-3831

From ab4el.com Wed Jun 15 17:59:51 1994
From: Jeffrey Herman <jherman@uhunix.uhcc.Hawaii.Edu>
Subject: Re: Sources of FT-243 Crystals?

Grover and the Gang:
There were an excellent series of articles about grinding your own crystals on the Boatanchors email reflector earlier in the year. Seems that goes

hand-in-hand with our QRP ideals. Possibly Bob Keys could repost his xtal-grinding article on here; Bob?

Jeff NH6IL

From ab4el.com Mon Jun 13 03:57:03 1994
From: Jeffrey Herman <jherman@uhunix.uhcc.hawaii.edu>
Subject: stuff for sale

Gang: yanked the following off of rec.radio.swap - please contact Jim if interested.

Jeff NH6IL

Sorting out shack and trying to scrounge enough money for that excellent-looking new Index Labs QRP rig. The following items are available. Prices are firm, and do NOT include shipping:

QRP GEAR

1. Heath HW8 and Heath power supply.

Unmodified. Presently being overhauled by Heath expert, so should be in excellent working condition when shipped (available some time in July). Cosmetically good, but case has on ding. Sold only as a pair.
\$125.

2. MFJ 9030 30 meter QRP Xcvr (no ps)

About a year old. Mint. Includes audio filter and built-in keyer. No manual.
\$150.

3. MFJ 9040 40 meter QRP Xcvr. (no ps)

About a year old. Mint. Includes audio filter, but NO keyer. Includes manual.
\$120.

Please respond by e-mail to this address. Thanks!

Jim Speer. K5YUT
Rt. 5, Box 3395
Nacogdoches, TX 75964.
409 569 6318
f_speerjr@ccsvax.sfasu.edu

From ab4el.com Thu Jun 16 13:10:33 1994

From: "Robert E. Easton"
Subject: Summer HB Sprint rules

<bobea@watson.ibm.com>

Finally rcvd the Spring issue of the Quarterly yesterday. NICE JOB to all who contributed! As a relatively new member, I have not seen the rules and calling conventions for the sprint events. With the summer hb sprint approaching, i thot they might be in this issue, but they are not. Could someone post a summary, or send me something directly? TNX!

73, Bob - N2IPY

From ab4el.com Wed Jun 15 10:09:21 1994
From: B61395@awtims.fe.anlw.anl.gov
Subject: T-Kits Received

Hi Gang -- I ordered two of the T-Kit "modules" (board and parts only, no cabinet) on June 6th, and received them yesterday, June 14th. Pretty good turnaround. Haven't had a chance to take a close look at them yet, may have to wait until after FD... 73, Bill, KR8L (wparmley@anl.gov)

From ab4el.com Thu Jun 16 00:51:09 1994
From: adams@chuck.dallas.sgi.com (Chuck Adams)
Subject: Toroids

If you have a choice on the wire size and a larger wire size, i.e. next smaller wire number, will work, by all means do so. It'll increase the Q and reduce the bandwidth. I'd bet that in most cases you might have to reduce the turn count by one or two due to increased distributed capacitance within the coil. I can do this calculation, but I have bigger fish to fry. :-)

dit dit
Chuck Adams K5FO CP-60
adams@sgi.com

From ab4el.com Fri Jun 17 08:53:04 1994
From: "W. Daniel" <pandora!daniel@Think.COM>
Subject: Transistor gain

Hi Gang,

Can anyone give me the hfe for the following transistors?
Power rating and comments are also welcomed. Come to think of it, I would appreciate any information you have on these transistors, I am trying to make a comparison but my book does not have the relevant info. Please give me whatever you have, even if its partial. Tks.

MRF476
MRF475
MRF237
2SC1909
2SC1944
2SC1945
2SC1964
2SC1969
2SC2020
2SC2028
2SC2029
2SC2039
2SC2043
2SC2050
2SC2075
2SC2078

73, (not a transistor! :)

Daniel

--

```
+-----+-----+
| Daniel Wee | daniel%pandora@csah.com | ** Man needs more
| UUCP1.12b | daniel.wee@f516.n600.z6.fidonet.org | than a new start, he
| SNEWS 1.91 | csah.com!pandora!daniel | needs a new heart! **
+-----+-----+
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From ab4e1.com Wed Jun 15 16:00:35 1994

From: "Evert Halbach" <CS-ERH@nich-nsunet.nich.edu>

Subject: TS-930s on QRP???

Anyone know how low I can crank down the power on the TS-930s???

My friend has a TS-940 and tells me that he can only go down to about 10-15 watts... Would be nice to use the 930 for a little qrp work with all the features available. Would that be considered "cheating"???

73s de WA50JI Evert

Evert R. Halbach WA50JI

Internet - cs-erh@nich-nsunet.nich.edu
Phone - (504) 448-4999
Snail - P.O. Box 2168 Thibodaux, La. 70310

From ab4el.com Thu Jun 16 00:11:26 1994
From: Mike.Czuhajewski%hambbs@wb3ffv.ampr.org (Mike Czuhajewski)
Subject: Re: TS-930s on QRP???

Argghhh.. can't remember when it was, but I covered many of the Kenwood rigs in the Idea Exchange several issues ago in the QRP Quarterly. The short answer is that many rigs will only go down to the vicinity of five or ten watts with the front panel power control fully counterclockwise, but it's an artificial limit, determined by an internal pot somewhere, and with adjustment of that pot the lower limit can go waaaaaay under one watt. Dig into the maintenance manual, adjustment section, if you have one. If not, let me know and I'll dig out the article and post it here. 73 de WA8MCQ

--

Mike Czuhajewski, user of the UniBoard System @ wb3ffv.ampr.org
E-Mail: Mike.Czuhajewski%hambbs@wb3ffv.ampr.org
The WB3FFV Amateur Radio BBS - Located in Baltimore, Maryland USA
Supporting the Amateur Radio Hobby, and TCP/IP InterNetworking

From ab4el.com Fri Jun 17 12:18:34 1994
From: lhalliday@creo.bc.ca
Subject: VE7LDH DXpedition

A very early note:

I'm going to be visiting Prince Edward Island in September, and will of course take radios with me. I also have a reciprocal license in the works for St. Pierre & Miquelon.

This will happen in the first week of September, probably on 40m CW. From PEI I'll be VE7LDH/VY2, and from St. Pierre I'll be FP/VE7LDH. There is the possibility of me spending a night in Newfoundland on the way to St. Pierre, in which case I'll see about VE7LDH/V01.

For you IOTA island chasers, PEI is NA-029, Newfoundland is NA-027, and St. Pierre is NA-032.

73 from Burnaby,
laura VE7LDH "Have radio will travel"

From ab4el.com Mon Jun 13 09:09:11 1994
From: brucerob@epas.utoronto.ca (Bruce Robertson)

Subject: W1FB 5-watt amp.

I finally got the amp for my tx/rx working to my satisfaction. I used the '5-watt class C QRP amp.' on pp. 129-133 of W1FB's QRP Notebook (2nd Ed.). A year ago I did it up on perf. board with poor results. The bug was traced back to the filter. Since then I ordered the pc board, re-wired it on the pc and got the same results. I figured this was the time to learn something, so I looked up 5 el. low pass filters in the ARRL Handbook. I discovered that there is a typo at the top of the chart on p 131 of the Notebook which makes the filters have the two outside inductors with a higher value than the inside one. One ought to transpose the headings 'L3' and L2, L4' at the top of that chart on p. 131. (Note that the beginning of table 4-1 on p. 130 is correct.)

I tested the filter I built from the Handbook with a qrp wattmeter and a rig set to qrp output. It was very interesting to see how effectively it blocked a signal on the harmonic of the cut-off freq. I found some attenuation on the frequency of operation, but I think that is from the 20+ feet of RG-174 I used to feed the filter. What is the least filter loss one can reasonably expect?

The rest of the amp went together like a snap. I spent a puzzled half-hour as I tried to figure out why the circuit had gone dead. It turned out the in-line DMM I'd used as a ammeter blew a fuse when I went key-down!

If anybody else has corrections for the QRP Notebook, I'd be happy to collect them and post a compiled list.

73, VE3UWL

Bruce G. Robertson internet: brucerob@epas.utoronto.ca
Dept of Classics Satius est enim otiosum esse quam nihil agere.
University of Toronto It's more fun to relax than it is to do nothing
 Pliny _Ep_ 1.9.8

From ab4el.com Mon Jun 13 15:51:35 1994

From: Jeffrey Herman <jherman@uhunix.uhcc.Hawaii.Edu>

Subject: Re: W1FB 5-watt amp.

Bruce and the Gang:

I only have the first edition of the QRP NOTEBOOK. In that edition Doug provides a 1W in - 8W out amp that uses two MRF475's. I don't believe this is the same amp that Bruce mentions in the 2ed ed. Has anyone built the 1st ed. amp and had it work?

.73,
Jeff NH6IL

From ab4el.com Thu Jun 16 10:56:31 1994

From: william.redfearn.cmwdr01@nt.com

Subject: Want dead HF rig

Looking for late model HF rig (WARC) with blown finals for a QRP project.
Especially interested in FT-707, IC-735, TS-530s, FT-101ZD, or any
TEN-TEC rigs.
73-Dave.

=====
Dave Redfearn, SR PC LAN Analyst Northern Telecom RTP, NC.
ph.(919) 992-3925 email: cmwdr01@nt.com qrl? de N4ELM/qrp

All opinions are my own and do not necessarily reflect the views of
my employer, co-workers or any other person, real or imaginary.

From ab4el.com Fri Jun 17 13:54:36 1994
From: Mike J Pulley <Mike_J_Pulley@ccm.ch.intel.com>
Subject: When did ground become blase'?

Text item: Text_1

Why don't QRP rigs have chassis ground lugs anymore?

Back when I was a Novice pup, the virtues of the Good Earth
Ground were preached right alongside those of an efficient
antenna system. Now, as a recent QRP retread, I hear little or
nothing about improving the ground path to maximize our QRP
signals.

Did we discover that ground just isn't as critical at QRP power
levels? Or perhaps do opposing pole antennas like dipoles, most
beams and the hotel dweller's counterpoise designs simply not get
much benefit from a ground path.

Regards,

-- Mike, WB4ZKA

I speak for myself, never for my employer over the INTERNET.

=====
Mike Pulley Intel Corporation
Phoenix, Arizona (USA) Mike_J_Pulley@ccm.hf.intel.com
Callsign: WB4ZKA
QRP rig: MFJ-9020 20m CW
QRP ant: Butternut vertical at ground level
QRP interests: Operating (WAS or bust!)

"People who say that there is no panacea have just never owned
a Swiss army knife." -- Thomas Sowell, 12/3/93

=====

From ab4e1.com Fri Jun 17 14:29:40 1994
From: adams@chuck.dallas.sgi.com (Chuck Adams)
Subject: Re: When did ground become blase'?

Mike,

All the OHR rigs have a ground lug on the back. I always thought
that this was a good idea.

dit dit
Chuck Adams K5FO CP-60
adams@sgi.com

From ab4e1.com Wed Jun 15 00:03:34 1994
From: BHOWLE@delphi.com
Subject: Where or where, Oh Wire Guage?

Uuh,

Cany anyone suggest where I might find a wire guage? I picked up
several rolls of wire at a recent hamfest, but have no idea what
gauge it is -

TNX - Bob - WA4ZID

From ab4e1.com Wed Jun 15 09:13:11 1994
From: epacyna@auratek.com (Edward Pacyna)
Subject: Re: Where or where, Oh Wire Guage?

Bob

In the event you don't find a wire guage here is a simple
method determine the guage of your newly acquired wire.

Wire guage tables are very common (i,e, ARRL handbook).
This table will list the # of turns per inch for each
standard guage. So all you need to do is wind 1" of
wire on a pencil and count the turns, or wind a specific
of turns and measure the space it took.

Ed W1AAZ

From ab4el.com Wed Jun 15 15:00:07 1994
Subject: Re: Where or where, Oh Wire Gauge?
From: mjsilva@ted.win.net (Michael Silva)

>Uuh,
>
>Can anyone suggest where I might find a wire gauge? I picked up
>several rolls of wire at a recent hamfest, but have no idea what
>gauge it is -

I don't know where you might find a wire gauge, but how about a dial micrometer? They're useful in lots of jobs, you can even get them in plastic if you're on a budget, and you can mike out a piece of wire in seconds. It's what I use when rating magnet wire from TV flybacks, etc. They're also useful in deciding how big a PCB hole to drill for components with odd leads, etc, etc.

Mike, KK6GM

From ab4el.com Tue Jun 14 08:41:10 1994
From: mvjfm@mvubr.att.com (James M Fitton +1 508 960 2577)
Subject: Who are you ?

Who on Inet are QRP-ARCI Officers/BOD/Editors/managers ?

WA8MCQ	IDEA ED.QQ	Mike.Czuhajewski%hambbs@wb3ffv.ampr.org
WB9TBU	EDITOR QQ	gpfranke@uxa.ecn.bgu.edu
N8DHT	TREASURER	72530.1666@CompuServe.COM
KI6DS	BOD	dh@deneb.csustan.edu,
W1FMR	BOD	mvjfm@mvubr.att.com
WB8VGE	MEMBERSHIP	73357.222@CompuServe.COM,
K5FO	AWARDS	adams@chuck.dallas.sgi.com
NN1G	TECH.ED.QQ	Bensondj@aol.com

(Note that many QRP ARCI officers also help run regional clubs)

Other clubs:

Rich, W0HEP, Pres. & Ed.	Colorado QRP	W0HEP@aol.com
Doug, KI6DS, Pres. & Ed.	NorCal QRP	dh@deneb.csustan.edu

Jim, W1FMR, Coord. QRP New Eng. mvjif@mvubr.att.com
Chuck, K5F0, Pres. & Ed. N.Texas QRP adams@chuck.dallas.sgi.com
Dave, NF0R, Contact..... St.Louis QRP Soc.
David.Gauding@stlug.cheswicks.toadnet.org

Updates to; Jim, W1FMR mvjif@mvubr.att.com

72 Jim

From ab4el.com Mon Jun 13 08:45:42 1994

From: "Robert E. Easton"

<bobea@watson.ibm.com>

Subject: Re: Xmtr, Wattmeter, or Dummy Load??

MANY THANKS to all who suggested that the dummy load was probably a wirewound. Yes, it was. I built a new dummy from some metal oxide resistors and the reverse reading came down to < 2 mw. Much better!

BTW, the OHR Spirit is doing a fine job. Now if we could just move those Euro BC stations out of the 40M novice/tech band. :-) Yeah I know, upgrade!

73, Bob - N2IPY